THIS WEEK'S National Petroleum NEWS

Index to Coming Meetings

Independent Oil Men of America, Stevens Hotel, Chicago, Oct. 21, 22, 23.

Northwest Petroleum Association, fall convention, Radisson Hotel, Minneapolis, Minn., Oct. 24.

Western Petroleum Refiners Association, Refinery Technologists, Mayo Hotel, Tulsa, Oct. 28, 29.

Mid-Continent Oil & Gas Association, Texas division, San Angelo, Tex., Nov. 8.

Nebraska Independent Oil Men's Association, Paxton Hotel, Omaha, Neb., Dec. 4, 5, 6.

Indiana Petroleum Association, Indianapolis, Dec. 5, 6.

Michigan Oil Men's Association, Statler Hotel, Detroit, March 19, 20, 21.

NATIONAL PETROLEUM NEWS

Vol. 21 No. 43

Published by

The National Petroleum Publishing Co.
1213 W. Third St., Cleveland, O.

Tel. CHerry 7672

Branch Offices:

Tulsa, 904 World Bldg., Tel. 3-7132.

New York, 342 Madison Ave., Tel. Vanderbilt 3951.

Houston, 2020 Gulf Bldg., Tel. Fairfax 6286.

Chicago, 35 E. Wacker Drive, Tel. State 4141.

Subscription rate $3.50 per year, U. S., Mexico and Canada; $5 Foreign countries. Current copies 10 cents; for back issues more than two months old 25 cents per copy.

All contents copyrighted, 1929, Trade Mark Registered U. S. Patent Office.

Member Audit Bureau of Circulations and Associated Business Papers.

General

California Crude Cut to 60 Cents to Check Overproduction 19
More Legal Barriers Built Up Against California Law 21
Review of Late Production News 28
Crude from Pure Oil's New Texas Field Shows 29% Gasoline 33
Oklahoma City Pool Hits New Peak; New Pool West of Wichita 40
Standard Kills Kettleman Hills Well to Seek Deeper Pay Sand 44
Potentials Fixed by Decline Curves in Okla. Proration 45
Drilling Reports from Leading Fields 45, 46, 47, 48
Record Demand for Fuel Oil in August Causes Off-Season Stock Cut 79
U. S. Crude Production and Imports, Week Ending Oct. 17 89

Engineering

Growing "Sink" in Sour Lake Field Results from Salt Solution 29
Artificial Gas is Successfully Stored Underground 30
Oklahoma City Pool is not Injured by Its 30-Day Shut Down 31
Land Trading in Western Kansas Almost at a Standstill 51
Progress in Knock Testing—Part II—*by Earl Bartholomew* 57
Gum in Gasoline—How It Performs in the Automobile Engine—*by E. B. Hunn, H. G. M. Fischer and A. J. Blackwood* 65

Merchandising

"For Code 100%" Indiana Standard Tells Big Four Jobbers 23
3 Ethics Code Recommendations Adopted by Penna. Jobbers 26
New York Driver's Strike Ends, Union Not Recognized 26
"Germ Process" Motor Oils to Be Announced by Continental 27
Vacuum Oil Co. Buys Interest in Lubric Refining Co. 27
Good Gas Plus Anti-Knock Rating, Theme of Ethyl Campaigns 69
"Kicks" Salesmanship, Direct Mail Build 200,000 Gallon Business 72

Markets

Mid-Continent, Natural Gasoline and Fuel Oils Most Active 93
Chicago, Burning Oil Prices Recede Slightly 95
Refinery Price Tables 96, 98, 99
California, Distress Goods Appear on West Coast 102
Pennsylvania, Burning Oils Move Higher 103
Eastern Domestic, Gasoline Quotations Are Unchanged 104
Gulf Coast, Gasoline Cargo Sold; Inquiry Better 104
Wax, White Scale Inquiries Brisk 105
Gulf Lubes, High Viscosity Lubes Lower 105
Complete Seaboard Prices 106
Tank Wagon Price Tables 108, 109
Crude Oil Prices, All Fields 111, 113

Departments

The Editors' Viewpoint 35
The Mid-Continent Skyline 36
Our Industry 42
New Patents 54
Visiting Around the Refineries 55
Letters to the Editor 64
On the Lazy Bench 71
Oil Trademarks for Copyright 77
Oil Company Finance 114, 116, 118

Photo by W. B. Paynter

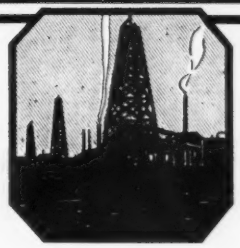
THE Paragon Refining Co., which recently purchased a controlling interest in the Valvoline Oil Co., is headed by E. W. Edwards of Cincinnati, who has been president since its reorganization several years ago.

Although he is the directing head of a bank and a number of important manufacturing enterprises and has a multitude of diversified business interests, Mr. Edwards does not keep his nose close to the grindstone. He finds time for golf regularly. He travels widely at home and abroad and is a collector of valuable paintings and antiques. In his collection of paintings may be found works of Reynolds, Rembrandt, Gainsborough, Franz Hals, Corot and other masters.

Mr. Edwards is a native of Pittsburgh. He comes from a steel family and the first company he organized, The Edwards Manufacturing Co., has made pressed steel service stations which dot many a roadside.

NATIONAL PETROLEUM NEWS

Published at
1213 W. Third St.
Cleveland



Branch Offices
Tulsa, New York, Houston, Chicago

Vol. 21 **CLEVELAND, October 23** **No. 43**

California Crude Cut to 60 Cents To Check Overproduction

CLEVELAND, Oct. 22

LIGHT gasoline crude in California is now selling for 60 cents a barrel, the lowest price on record since the early flush days of the Mid-Continent field.

The new price, effective Oct. 21, and less than half of the former price of light crudes in California, is the direct result of continued overproduction there.

The Standard Oil Co. of California leading operator on the Pacific Coast and a staunch advocate of the new gas conservation law there, put the new price into effect when it became apparent that direct opposition of some of the smaller operators, and lack of support by other companies, is preventing the new law from becoming effective.

The Standard of California price reduction applied to the Santa Fe Springs, Seal Beach and Signal Hill fields, the districts of greatest overproduction. Its former schedule ran from $0.70 a barrel on 14-14.9 gravity crude to $1.65 on 39-39.9 gravity oil, in these districts with varying prices for different gravities. The new prices are $0.40 for crude up to 25 gravity in Signal Hill and Seal Beach and up to 30 degrees gravity in Santa Fe Springs; and $0.60 for higher.

The General Petroleum Co., Shell, The Texas Co., Richfield and Union Oil Co. reduced their posted prices in these three fields to conform with the Standard's new prices.

The Union Oil Co. on Oct. 22 announced a cut in the price of Ventura Avenue oil similar to that made by the Standard in the other flush fields. For oil ranging in gravity from 19 to 24.9 degrees Union posted a price of 40 cents per barrel. For oil of 25 to 32.9 gravity the company will pay 60 cents.

No change was made by the Union in crude oil prices in the Elwood district because of the cut made earlier in the year. It is understood that a

"Economic Conditions Justified Drastic Cut"

By Telegraph
LOS ANGELES, Oct. 21

THE official statement of the Standard Oil Co. of California, accompanying the cut in crude oil prices, signed by President K. R. Kingsbury, was:

"Since the first of January 1929 there has been added to storage over 40,000,000 barrels of oil and at present the overproduction is 200,000 barrels per day.

"In addition there is being blown into air in California at the present time 800,000,000 cubic feet of gas daily. This is more than twice as much natural gas as is now being used for industrial and domestic purposes in the state. In terms of fuel oil this quantity of gas is equal to 132,000 barrels per day.

"The last legislature of the state of California passed an act prohibiting the waste of natural gas. On June 26, 1929, authorities charged with enforcement of this law notified the oil industry that the law would be put into effect at midnight Aug. 31, 1929.

"Enforcement of this law will not only stop the waste of natural gas, but will result in material curtailment in the production of crude oil. Anticipating that the law would be enforced, this company refrained from reducing its offered price for crude oils in the fields mentioned, although it has been evident for several months that economic conditions justified a drastic cut in the price of crude oil.

"Since Sept. 1, 1929, there has been continued opposition to the state conservation law on the part of those controlling a small percentage of production in the fields affected, which opposition continues to delay the operation of the law, thereby prolonging the indefensible waste of great quantities of natural gas and resulting in an overproduction of crude oil in fields in question.

"Within the last few days the corporation commission of the state of Oklahoma with unanimous support of operators and royalty owners has curtailed production in the flush and semiflush fields of Oklahoma so as to balance supply and demand. A similar cooperative effort has in the past successfully controlled and is now controlling overproduction in Texas. Cooperative effort in the state of California to control flush pools has failed, notwithstanding the fact that in one of our flush fields it had the support of 85 per cent of production.

"It is an established policy of this company to currently offer producers such prices for crude oil as conditions warrant. Present conditions do not justify offering of prices which will encourage continued overproduction."

cut may be made in Elwood crude at a later date unless there is a material reduction in production.

The overproduction of crude in California had warranted lower prices for some time, but it was anticipated the industry would accept the new gas conservation law and thus bring about the needed curtailment, so the Standard had refrained from cutting its prices, said the official statement from President K. R. Kingsbury accompanying the announcement of the price reduction.

It was this note in the official company statement that leads oil companies in other fields to believe that this present price of 60 cents a barrel for gasoline crude may not continue for long, if it serves the purpose of bringing into line the companies that have been opposing the new law in California.

Anticipating that such a price for the raw material from which gasoline is manufactured which is selling in competition with gasoline from practically every other refining district in the country, if long continued, would seriously affect operations in other districts, operators there, nevertheless, consider no change imminent in their operating plans.

In Oklahoma, where all flush fields are now under proration to hold crude production there to about current market needs, sentiment among heads of the oil companies, as canvassed by the Mid-Continent bureau of NATIONAL PETROLEUM NEWS, was for continuing proration without change.

Concern is felt by some that such a low price as at present in California, if long continued, would bring down the price in the Mid-Continent field despite proration.

It is felt over the country that the low prices for crude in California will make their effect felt on the gasoline markets nation wide. It is already reported that a number of small refineries in California, which could not operate profitably on the old price of crude, are planning to run at capacity the next few weeks.

In general, California refineries, because of a surplus of crude for months, have been making gasoline this year at half again their rate in 1928. They carry some 13,000,000 barrels of gasoline in storage there, a third of the total gasoline stocks of the country. They added to these stocks in August, the peak of gasoline consumption for the country as a whole. With gasoline being manufactured at this rate in California, gasoline from this territory has already encroached on the natural marketing districts of other refining territories to a greater extent this year than ever before.

It is reported from California that the effect of the drastic cut in crude is already bringing into line the companies that have opposed putting into effect the new gas conservation law, through seeing their income from their crude production more than cut in two.

New Price Schedule In California

(By Telegraph)

SAN FRANCISCO, Oct. 21.—Standard Oil Co. of California today reduced prices it will pay for crude oil in the Santa Fe Springs, Seal Beach and Signal Hill fields in amounts ranging from $0.40 to $1.05 per barrel. A flat price of $0.40 was posted for 21 to 28.9 gravity oil and $0.60 for 29 to 39.9 gravity in Santa Fe Springs. A flat price of $0.40 was posted for 19 to 24.9 gravity oil and $0.60 for 25 to 32.9 gravity oil in Signal Hill and Seal Beach fields.

Old and new schedules posted by the Standard in these fields compare as follows:

Santa Fe Springs

OLD

21-21.9	$0.89	30-30.9	$1.20
22-22.9	0.92	31-31.9	1.25
23-23.9	0.95	32-32.9	1.30
24-24.9	0.98	33-33.9	1.35
25-25.9	1.01	34-34.9	1.40
26-26.9	1.04	35-35.9	1.45
27-27.9	1.07	36-36.9	1.50
28-28.9	1.10	37-37.9	1.55
29-29.9	1.15	38-38.9	1.60
		39-39.9	1.65

Signal Hill & Seal Beach

NEW

21-28.9	$0.40	29-39.9	$0.60

OLD

14-14.9	$0.70	23-23.9	$0.97
15-15.9	0.70	24-24.9	1.01
16-16.9	0.70	25-25.9	1.05
17-17.9	0.70	26-26.9	1.09
18-18.9	0.75	27-27.9	1.13
19-19.9	0.80	28-28.9	1.17
20-20.9	0.85	29-29.9	1.21
21-21.9	0.89	30-30.9	1.25
22-22.9	0.93	31-31.9	1.30
		32-32.9	1.35

NEW

19-24.9	$0.40	25-32.9	$0.60

Novel Prorating Method In Oklahoma City

(By Telegraph)

TULSA, Oct. 22.—A novel method of realizing the 40 per cent proration for the Oklahoma City pool during November was agreed upon by operators at a meeting held October 21. The producing wells of the field will be divided into two groups and each group will be shut in alternately for four days while the other produces.

An in-between period of two days during which all wells produce is provided when each group has taken its four days shut down. Thus one-half of the wells will produce from Nov. 2, to Nov. 6, while the other half is shut in. The shut in wells will be opened to production Nov. 6 to 10, and the others shut in.

All wells will produce Nov. 10 to 12 and the cycle will start again. As an equalization measure, to take care of the several big wells that have come in since the lifting of proration and have been permitted to flow 24 hours, all wells will be shut in 24 hours next Sunday.

Third Good Well in Darst Creek

(By Telegraph)

HOUSTON, Tex., Oct. 21.—The third good well in the Darst Creek field southwest of Luling has been completed by the Magnolia Petroleum Co., drilling on the Appling farm in the James Hodges survey. It came in making upwards of 2000 barrels daily of 36.6 gravity oil from Taylor Marl formation at a total depth of 2536 feet.

The well is a mile and a half southwest of the Manford well of Robert R. Penn and others which made 900 barrels daily maximum. The Manford well is now operated by the Simms Oil Co. of Dallas, which bought a half interest from Penn and associates.

Wells on the Appling and Manford farms are respectively upwards of four and five miles northeast of the Darst Creek discovery of The Texas Co., which made 1500 barrels initial production from the Edwards lime formation at the 2700 foot level. Development adjacent to The Texas Co. discovery has been held back under a gentlemen's agreement among operators in attempting to keep down crude oil congestion.

Independent Buys Kettleman Lease

LOS ANGELES, Oct. 18.—Seeking the production offered by California oil sands that often are several hundred feet in thickness, Independent Oil & Gas Co. of Oklahoma has leased 160 acres on the south dome of Kettleman Hills. This land is on the extreme south end of south dome and not at all in proven territory.

Although active drilling on its California land is not contemplated at the present time Independent has opened an office in the Quinby Building, Los Angeles with Carl H. Beal in charge. It is reported that the company will enlarge its California holdings at some future date.

Reeves County Crude To Have Market

HOUSTON, Oct. 19.—Lockhart & Co., West Texas producing subsidiary of the Rio Grande Oil Co., is reported going ahead with plans for constructing a 22-mile, 4-inch, pipeline from the Wheat oil field, in Reeves county, to loading rack facilities at Pecos City, on the Texas & Pacific railroad.

Shipments of crude will be made in tank cars to the El Paso refinery of the Rio Grande. Announcement was made some time ago of the Rio Grande's plan to build additional facilities at the El Paso plant for the manufacture of lubricants from crude produced at the 4100 foot level in the Wheat oil field.

More Legal Barriers Built Up Against California Law

By Telegraph

LOS ANGELES, Oct. 22

THE latest angle in the court proceedings brought under the new gas conservation law in California is an appeal to the District Court of Appeals by the companies opposing the new law, asking that judicial body for an order restraining the Superior Court of Los Angeles County from taking any further immediate action in the case now pending there.

State conservation officials sought a temporary injunction in the superior court restraining operators in the Santa Fe Springs field from unreasonably wasting gas.

The order from the higher court was asked by the Wilshire Oil Co. and allied interests. It brought a motion in the lower court seeking that all parties necessary to the action (including land and royalty owners) be brought into the injunction proceedings before any court move be made. It now asks the court of appeals to order the lower court to take this action.

The superior court must appear before the district court of appeals Oct. 28 to answer on this point and as a result the hearing before the appelate court on the original injunction has been set forward to Oct. 31.

On Oct. 17 Judge Hazlett, of the superior court, denied the motion brought there by the Wilshire and other Independent interests asking that all parties at interest, such as lessors, owners of oil lands, mortgagees and trustees holding title to securities issued by operators be made party in the injunction suit brought by the state, along with the oil companies. He also overruled a second motion that more time be granted for the defense to study the case.

In the Ventura Avenue field proceedings the Associated Oil Co., the Shell Oil Co. and the General Petroleum Corp. have appealed the order of Supervisor Bush which was to have put the operating plan under the new law in effect in this field Oct. 15. These companies state they will not sign the operating agreement without certain modifications.

At Ventura avenue the second of the two methods open to the state for enforcing the act was used. At Santa Fe Springs the case was taken immediately before the superior court and no order was issued directly. The latter action was adopted at Santa Fe Springs because of the large number of townlot operators and it was considered impossible to obtain cooperation from all of them. At Ventura Avenue there seemed at first to be considerable hope of getting the backing of the operating companies.

During the hearing of the Santa Fe Springs case James S. Bennett counsel for the state submitted the temporary injunction that the state intended asking the court to issue. The salient points of this injunction as it was read were as follows:

That the defendant oil producers in the Santa Fe Springs field be injoined from and after 12:00 o'clock noon October 21 until further order of the court:

1. From blowing, releasing or permitting any natural gas to escape into the air from any well in the Santa Fe Springs field before the removal of the natural gasoline.

2. From allowing natural gas to escape into the air after removal of natural gasoline in excess of 300 cubic feet of gas to each barrel of oil produced from any well in the months of June, July, August, and September of any year. Or in excess of 150 cubic feet of gas to each barrel of oil produced from any one well in months of April, May, October and November of any year, or in excess of 5 cubic feet per barrel of oil produced from any one well in the months of January, February, and March of next year.

(This difference is due to the increased seasonal demand for natural gas during the winter months. The above policy of the state is also altered from that proposed at the beginning of the legal proceedings. When first offered the intention was to prohibit any blowing of natural gas into the air whatsoever and it, therefore, marks an attempt of the state officials to meet the oil operators at least part way.)

3. From selling natural gas to anyone who will allow the natural gas to escape into the air either before or after removal of the gasoline content. That is anyone who allows an amount in excess of the quantity allowed under paragraph 2 of this order.

4. From blowing or releasing any natural gas produced in the Santa Fe Springs field received from any defendant either before or after removal of the gasoline content.

5. From keeping on production any well in the Santa Fe Springs field which produces gas and oil at an oil to gas ratio in excess of 3000 cubic feet of gas per barrel of oil produced. An excess may be produced if such amount over the allowed 3000 cubic feet to one barrel of oil is returned in to the subsurface of the earth for the purpose of storage or repressuring.

6. From operating any well producing gas in the Santa Fe Springs oil field except while exercising a high degree of care in the selection and adjustment of appliances for the purpose of keeping each producing well at its "Optimum oil to gas ratio" (Optimum oil-to-gas ratio being defined as the smallest number of cubic feet of gas which can be produced with each barrel of oil from the same well at the same time).

7. From producing gas from any well brought in after October 21, 1929 penetrating the Foix zone at Santa Fe Springs or producing gas from any zone which cannot within a total of 25 days hereinafter allowed for new completions, be so controlled and adjusted that it will produce 2500 cubic feet of gas or less to each barrel of oil unless any excess is returned out of the gas produced back into the subsurface of the earth for the purpose of storage or repressuring.

In the injunction being sought it is further provided that new wells may blow wide open up to and including the fifth day after completion, for the purpose of bringing them under control. This is to be allowed however only if the operator proceed with due diligence and according to best practice.

This proposed order was met with considerable derision on the part of counsel for the defendants and they pointed out to the court that if any such restraining order were issued its effect would be the same as if a permanent order were granted because, as they were ready to prove, a well once beaned back never again reached its former yield with a subsequent loss to the operator and land owner.

It becomes quite apparent as the trial proceeds that a great many concessions will have to be made on both sides if any workable plan is to be developed. The injunction, as outlined above, will undoubtedly suffer a number of revisions before it is finally granted, if indeed that time is ever reached.

In a polling of the various counsels present during the hearing on the injunction it was apparent that although nearly all of them had filed protective demurrers and pleadings, only a few of the independents would openly challenge the constitutionality of the act.

A few of the answers to the court's question as to what stand individual

companies would take on the constitutionality of the law follow:

General Petroleum Corp. does not question constitutionality but has issued a demurrer.

Associated Oil Co. does not question constitutionality.

The Texas Co. does not question act but has put in a demurrer as a protective measure. The Texas Co. believes that the disposal of oil and gas is a matter of vital importance to all concerned.

Union Oil Co. (one of the most ardent supporters of the conservation law) does not question act and did not file any demurrer.

Standard Oil Co. does not question constitutionality, did not file a demurrer and offers to give testimony in favor of the act any time the court may desire.

Richfield Oil Co. does not question act and filed no demurrer.

Among the Independents to state that they questioned the constitutionality of the act the following were the most aggressive: Oscar R. Howard; Wilshire Oil Co.; 2nd Twin Bell and Star Pet. Co. George F. Getty did not wish to question the act's constitutional aspects at the present time.

New Commission to Deal Only with Public Land

WASHINGTON, Oct. 21.—Any thought that President Hoover's Commission on Conservation and Administration of the Public Domain will encroach in any way on the Federal Oil Conservation Board's work is as unwarranted as an expectation that the leopard will change his spots.

Its creation, announced by President Hoover Oct. 18, will not result in the abolition of the board or the assumption of any of its duties by the body of which James R. Garfield, former secretary of the Interior, is the chairman.

Secretary of the Interior Wilbur made that fact clear in a talk with the writer shortly after the President had announced the creation of the new commission and the selection of its 13 members. He pointed out that the title of the land owned by the United States, for administrative purposes, is in the head of the Department of the Interior. Part of the care of it is entrusted to the head of the Department of Agriculture.

An idea that, perhaps, the new commission might displace the Federal Oil Conservation Board was created by the fact that President Hoover pointed out there were three outstanding problems in connection with the public domain: overgrazing on government land; the best method of applying a reclamation service to gain real and enlarged conservation of water resources in the west; and the conservation of oil, coal and other minerals on the public domain.

According to Secretary Wilbur, whatever consideration the commission may give to oil or other mineral conservation will be from the point of view of the government as the proprietor of such minerals. The Federal Oil Conservation Board deals with the subject of waste of oil regardless of ownership.

This conservation commission is to advise the government as to the best methods to be used in the development and use of the land in which it holds title, not as a sovereign but as a proprietor. It ties in remotely with the conservation of oil, regardless of ownership, because one of the projects near the heart of the President is the finding of some way to have the title to the surface of the public lands transferred to the states.

Large questions of protection of water-sheds for instance, Secretary Wilbur pointed out were created by the checker boards in all the public land states, one section being owned by the government, another held in private ownership and a third held by a state for school purposes. Taking care of the surface, he suggested, was a problem that could not be dealt with on the basis of the imaginary lines of the surface separating the right of possession of one owner from that of another.

New Interpretations Of the Code

NEW YORK, Oct. 19.—Additional interpretations of Rule 10 of the code of marketing practices, as it relates to furnishing equipment to dealers by oil companies, have been made by the National Committee on Interpretation, it has been announced by the American Petroleum Institute.

"The provision in this rule that air compressors, greasing lifts, tanks or similar equipment shall not be loaned or furnished by refiners, wholesalers, distributors and jobbers to dealers means that such equipment shall not be sold, leased, exchanged or furnished in any way by the companies to dealers and contemplates that the companies are not to sell or handle such equipment except for their own use and in the case of airports, as provided in Rule 8 hereof."

Rule 8 provides that dispensing and storage equipment shall be furnished to airport operators or resellers of petroleum products only at full cost for equipment and installation.

The Committee on Interpretation also announced a further interpretation of Rule 1 covering installation costs to be charged against station operators where pump and tank equipment is put in by oil companies.

"The cost of installation of gasoline and kerosene pumps is defined to be the entire cost of the labor and material (including piping, fittings, concrete work, electric wiring and connections) required to install such equipment ready for operation. It does not include the cost of the pump and tank, foot valve, fill box and the expense of transportation, expressage and drayage."

CLEVELAND, Oct. 20.—John M. Mayhall has been made representative of the Anderson-Prichard Oil Corp. in Illinois. He will make his headquarters in Springfield. Anderson-Prichard has general offices at Oklahoma City and refineries at Colorado, Texas, and Cyril, Okla.

American Petroleum Institute report of refinery operations in the United States for the week ending Oct. 19, compared with the week ended Oct. 12

Districts	Per Cent of Capacity Reporting	Crude Run to Stills Wk. Ended 10-19 (Barrels)	Crude Run to Stills Wk. Ended 10-12 (Barrels)	Per Cent of Reporting Capacity Operated Wk. Ended 10-19	Per Cent of Reporting Capacity Operated Wk. Ended 10-12	Stocks Reported in Thousands of Barrels: Gasoline Stocks Oct. 19	Gasoline Stocks Oct. 12	Gas & Fuel Oil Stocks Oct. 19	Gas & Fuel Oil Stocks Oct. 12
East Coast	100.0	3,552,100	3,426,600	85.8	82.7	4,261	4,429	9,163	8,798
Appalachian	89.5	622,500	553,200	79.6	72.3	790	795	740	748
Ind.-Ill.-Ky	98.0	2,125,000	2,108,800	90.8	90.1	4,013	4,027	3,791	3,687
Okla.-Kans.-Mo	84.5	1,952,100	2,153,300	76.9	80.5	2,240	2,326	4,020	4,233
Texas	91.6	4,205,200	4,358,400	89.2	92.6	4,334	4,309	13,776	13,455
La.-Ark	97.1	1,483,800	1,362,000	80.2	73.6	1,637	1,642	5,016	5,172
Rocky Mountain	93.4	475,400	476,500	54.7	54.1	1,713	1,676	972	960
California	98.4	5,175,900	5,079,900	89.4	87.8	13,172	13,120	108,943	108,155
Total U. S.	94.9	19,592,000	19,518,700	85.1	84.3	32,160	32,324	146,421	145,208
Texas (Gulf Coast)	100.0	3,233,500	3,424,900	91.7	97.2	3,628	3,651	10,335	10,158
La. (Gulf Coast)	100.0	1,035,000	928,500	84.0	75.2	1,366	1,392	4,273	4,425

"For Code 100%", Indiana Standard Tells Big Four Jobbers

KANSAS CITY, Oct. 18.

THE Standard Oil Co. of Indiana signed the code wholeheartedly and without reservations and will observe it down to its essence, E. J. Bullock, vice-president of that company, told more than 400 Missouri, Kansas, Iowa and Nebraska jobbers at the Big Four States Jobber convention here this week.

Mr. Bullock's assertion was reiterated a few minutes later at the afternoon session Oct. 16 by Amos Ball, general manager of the Standard of Indiana.

It was the first time these two men, and it was said any other high officials of the Standard of Indiana, ever addressed a convention of Independent oil marketers and their appearance was the sensation of the meeting which attracted approximately 600 oil and equipment men to Kansas City.

"They're making history here this afternoon," was a statement that was whispered many times about the convention room when it was seen the two Standard of Indiana executives were present.

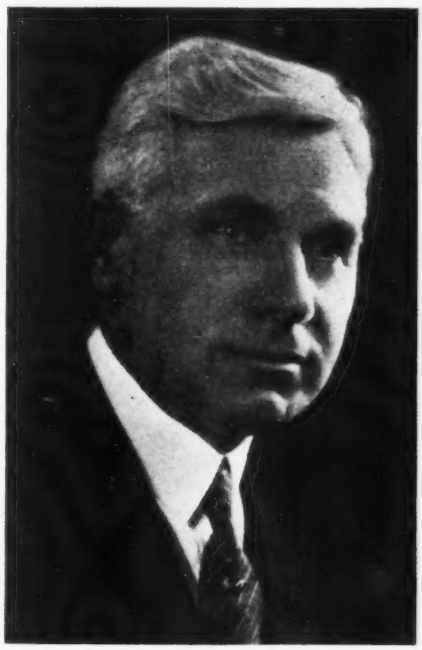
Mr. Bullock said his company expected to follow the code "100 per cent" and endeavor to bring order to former chaotic markets. He accepted his share of the blame for conditions that had disrupted markets in the past and did not attempt to shift any on us for unsound and unprofitable practices to the Independent distributors.

"The Standard Oil Co. of Indiana is adhering to the code in the manner in which the code is drafted," Mr. Ball said. "We propose to go through with it to the end.

"This is the first time we have ever been invited or even permitted to attend an Independent oil men's meeting. The code provides a method by which we can get together and discuss our problems. What has happened since the code was signed? Nothing much, except that we can meet and talk with you men."

Mr. Ball said that, when the company signed the code, E. G. Seubert, its president, instructed the marketing department executives to see that the entire marketing organization was made to understand what it meant. Branch managers were called in and the code was analyzed for them. Group meetings of field managers were then called with the branch managers presiding.

"If you find any member of our organization evading the code, we want you to tell us about it," Mr. Ball added. "We urge you to do so. We want to live up to the code fully. We have always lived up to the provisions of Group I rules. As to Group II rules, there is no power to enforce them except us. Enforcement rests on persuasion, good sense, and common decency. This code is just the beginning of what we hope to accomplish."



E. J. Bullock, vice-president of the Standard Oil Co. of Indiana, who discussed the code with Independent marketers at Kansas City

The code was the main subject discussed at the convention. Two other principal subjects were one-stop stations and aviation.

E. B. Reeser, president of the American Petroleum Institute and the Barnsdall Corp., reviewed the activities that led to the drafting of the code, the St. Louis conference of last February, and the promulgation of the code by the Federal Trade Commission July 25.

Competition in our industry had been too individual, Mr. Reeser said, with resultant lowering of business practices. He said the expansion of marketing facilities had been similar to the expansion of saloons, a process which led eventually to the Eighteenth amendment and the Volstead law.

He cited the recent prediction of Roger W. Babson that the oil industry would become a public utility. He said the marketers and the rest of the oil industry had the power in their hands to make the prediction untrue. Ethical marketing practices as sought by the code was a means of forestalling the Babson prediction, he indicated.

Elwin E. Hadlick, counselor of the Northwest Petroleum Association, Minneapolis, conducted a school on interpretation of the code, taking up the code rule by rule and giving the interpretations.

Practices of two companies were brought into the discussion. One case was the complaint of the Stoll Oil Refining Co. of Louisville, Ky., against the Standard Oil Co. of Indiana.* This was a protest over the Standard's agent agreements in which a dealer's place of business is leased by the supplying company and the owner acts as agent under a Q. D. A. commission. Mr. Hadlick said that the practice did not violate the code as drafted.

The other case was that of the Phillips Petroleum Co., which is expanding its marketing facilities in the middle west. Phillips was reported to be giving away gasoline and favors of value on opening days of its new stations. It was said that Phillips was abiding by all but Rule 16 of the code. This rule is an expression in opposition to the giving away of merchandise or any article of value.

Mr. Hadlick filled a vacancy on the program made by the inability of H. T. Klein, chief counselor of The Texas Co. and chairman of the National Committee on Interpretation of the code, to come to Kansas City.

In an address "Super-Service Stations from the Tire Man's Viewpoint," C. L. Buell, assistant to the president, Goodyear Tire & Rubber Co., Akron, O., traced the development of gasoline and oil merchandising methods from the alley garage to the one-stop stations where about all the ordinary requirements of an automobile are obtainable.

"The drive-in filling station came into being, was, and still is, very popular. It will continue so because it fills a real need," Mr. Buell said. "But now comes another change: the drive-in filling station is gradually absorbing other automotive service, with the result that we are hearing much about master service stations, super-service stations, one-stop service stations and so on.

"Now let us find out what a super-

*See NATIONAL PETROLEUM NEWS, Oct. 2, 1929, page 27.

service station is, and to which particular branch of the automotive industry does it belong?

"One claims that super-service is in the car dealers' field, another that it is the proper designation for a modern gasoline and oil station, and a third that the tire dealer should be the super-service station operator.

"No matter how one surveys the situation there is one factor that stands out very impressively, namely: that the sale and servicing of tires plays a big part in developing the sales volume and profits of a super-service station.

"Many analyses have been made of the super-service field and practically all of them indicate that tires and tire repairing, and those other services that have a direct bearing on tires, are conspicuous factors in the activities of the super-service station operator.

"Operators who display good judgment generally confine their super-service station activities to tires, tubes, gasoline, oil, batteries, and the services that go with them. Furthermore, speaking for tires and batteries, they confine their activities to one good line of well advertised and nationally-known merchandise that has a ready public acceptance. When diversification of merchandise and activities is carried too far, the dealer is very apt to find it difficult to control his business.

"Whether it be an oil man or a tire man that expands his business to super-service, his success depends entirely on his capacity and ability to conduct the new and larger business on a profitable basis.

"The idea is a splendid one, and, sooner or later, competition by reason of this new trend of merchandising may necessitate super-service operations if one wishes to stay in the field."

Mr. Buell said there were many things to be considered before building a fine-looking station and putting it into operation. One of the chief things he said was not to attempt too monumental a building at the beginning, because a building alone will not build a business. He warned against overexpansion which might mean the originator of the business would find himself playing second to an organization that would supply the capital necessary to handle the enterprise.

Sales efforts in super-service stations must be backed up with courteous, willing, helpful and obliging service, Mr. Buell said. Management was of great importance, he added, and he summarized management of a one-stop station organization as follows:

1. ANALYZE—Study the work to be done.

2. ORGANIZE — Group the different things to be done.

3. DEPUTIZE—Make some person responsible for each group.

Amos Ball, general manager of the Standard of Indiana, who also addressed the Kansas City meeting of Independent marketers

4. TRAIN—Teach each person how to do his work.

5. SUPERVISE—Check up regularly to be sure everything is being done properly and at the right time.

Roger B. Stafford, NATIONAL PETROLEUM NEWS, reiterated his analysis[1] of the one-stop stations as given before the Ohio Petroleum Marketers Association at Columbus in September.

"There undoubtedly is a limited field today and tomorrow for the one-stop method of merchandising automobile needs," he concluded, "but the one-stop station will not exterminate the well-managed neighborhood station which sells good quality goods and gives thorough lubrication service.

"There may be added some diversified merchandise, the handling of which will not interfere with the selling of the main and more profitable lines—gasoline and motor oils and lubrication.

"The future will develop what can be handled profitably and the diversification tomorrow may even be tires and batteries restored to the profitable level they once occupied."

"Pressure of economic circumstances is dictating many of the mergers in the oil industry but merging for the sake of merging is skating on thin ice," said Keith J. Fanshier, Chicago, in a paper, "Mergers—The Place of the Independent Jobber and Retailer of the Future." He said it was not understandable why there were so many mergers in a year that Independent jobbers were selling more gasoline and oil making more profits than in recent years.

Speaking of one-stop service stations in which tire manufacturers were financially interested, Mr. Fanshier said the Firestone Tire & Rubber Co. was interested in about 200, Goodyear Tire & Rubber Co. in about 100; B. F. Goodrich Rubber Co. in about 80, and the United States Rubber Co. in a few. These companies are the Big Four of the tire industry.

He gave the following "break-down" of the distribution of the 80,000,000 tires produced in 1928:

New automobile equipment	21,500,000
Spares sold by car dealers	6,000,000
Commercial vehicle tires	12,000,000
Exports	2,500,000
Mail order house sales	13,000,000
Manufacturers' retail outlets	2,000,000
Other retail sales, dealers	23,000,000

Average number of tires sold per retail outlet, 230.

Rapid growth of air transportation was predicted by Franklin Moore, president of Fairfax Airports, Inc., Kansas City, which operates a chain of three airports and three training fields in Kansas. The planes needed for the growth, and the airports themselves because they attract many people, will offer an excellent market for gasoline and oil, Mr. Moore said.

He said any oil man who wishes to promote aviation if there is no airport at present in his town, would do a good thing by acquiring 160 acres near the town and developing a port.

W. J. MacKenzie, United States Department of Commerce, Washington, told the jobbers that quality alone would sell their products to the aviation industry. He urged them to make frequent trips to airports where their goods were sold to see that tanks and other handling equipment were in good condition.

Art Goebel, who flew from San Francisco to Hawaii, said he and many other aviators he knew bought gasoline on brand; that aviators watched their gasoline almost with suspicion and that the reputations established by numerous refining companies for good quality aviation gasoline influenced many fliers always to ask whose gasoline it was when their ships were being refueled.

Lieut. W. S. Dawson, Curtiss Flying Service, Inc., Kansas City, said that many forced landings were blamed on gasoline but the gasoline was not always at fault. He warned the oil men, however, to guard against the "cutting" of gasoline after it has left their storage plants. "Cutting" is adulteration with cheaper and less suitable gasoline in order to obtain a larger profit.

The men of the convention were entertained with a buffet supper and musical show Oct. 16 by the Kansas City Oil Men's Club of which Royal S. Reed is president.

Women who attended, were entertained Oct. 16 with a luncheon at the Kansas City Club, and then were

[1] See NATIONAL PETROLEUM NEWS, Oct. 2, 1929, page 111.

taken a bus ride over the city's boulevards. At 5:30 they were taken to see "Strange Interlude" and at the 7:40 intermission of that long play they were served dinner at the Kansas City Athletic Club.

The first session of the convention was under the auspices of the Kansas Oil Men's Association, of which A. C. Carpenter, Ottawa, is president, and John A. Motter, Wichita, secretary. The second meeting was under the auspices of the Iowa Petroleum Association, of which J. M. Cushman, Des Moines, is president and M. L. Long, also of Des Moines, is secretary. The third session was directed by the Nebraska Independent Oil Men's Association, of which S. A. Wasum, Tekamah, is president, and Charles M. Sutherland, Lincoln, secretary. George S. Allee, president and secretary of the Missouri association, was general ringmaster.

* * *

Merrill Nibbs edited a two-page newspaper published by the Columbian Steel Tank Co. for the convention.

* * *

During the meeting the Dixie Distributors shipped a train of 39 carloads of high test and high compression gasoline, and kerosene from the Kanotex Refining Co.'s plant at Arkansas City through Kansas City to Milwaukee where the train was to be broken up and the products sent to various distributors, no more than three carloads going to any one distributor.

* * *

Jacobson Oil Co., Kansas City, introduced its new graphite impregnated motor oil to the oil men of the four states by running a Model A Ford coach 50 miles after the oil had been drained from the crankcase. The feat was witnessed by disinterested oil jobbers Oct. 15 and that night a telegram was sent each registered man at the convention, telling him about it.

* * *

Butler Mfg. Co. exhibited near the hotel where the convention was held an 800-gallon semi-trailer truck tank drawn by a Model AA Ford truck.

Missouri Jobbers Elect Officers and Board

KANSAS CITY, Oct. 18.—At the annual meeting of the Missouri Oil Men's Association held in connection with the Big Four State jobbers' convention here this week, the following officers were elected:

President: George S. Allee, Kansas City.

Vice-Presidents: C. L. Ackert, Pierce Petroleum Corp., St. Louis; W. H. Smith, Red Eagle Oil Co., Macon; George Koertel, Liberty Bell Oil Co., St. Louis, and J. G. Gibson, Capital City Oil Co., Jefferson City.

Treasurer: C. W. Elstun, Scout Oil Co., Kansas City.

Directors: W. T. Atkins, Skelly Oil Co., Kansas City; Bert Bertram, Bertram Naphtha Co., Kansas City; Paul Brown, Independent Oil Co., St. Louis; W. R. McCain, Purity Oil Co., Springfield; Paul McMahan, Independent Oil Co., Seymour; H. H. Mietz, Independent Oil Co., Maryville; J. E. Bacon, Barnsdall Refining Co., Kansas City; H. E. Miller, Miller Oil Co., Festus; H. G. Simpson, Simpson Oil Co., Charleston; Roy Leonard, Leonard Oil Co., Columbia; C. C. Divinny, Independent Oil & Gas Co., Kansas City; C. B. Hood, Tide Water Oil Sales Corp., Joplin, and Walter H. Ware, Lubrite Refining Corp., St. Louis.

Procedure Under Code Changed in Texas

HOUSTON, Oct. 24.—Notice of a change in the procedure to be followed by oil companies in Texas under the code of marketing practices, approved by the directors of the American Petroleum Institute, is being sent all companies in that state by L. H. Flinn, managing director and counsel of the Texas Petroleum Marketers Association.

Oil companies in Texas believed a change in the general procedure, as outlined in the resolutions adopted by institute directors July 30, was necessary in Texas because of the nature of the state anti-trust law. A special committee was appointed to draft an amended resolution and a form of acceptance which would conform to the Texas law. Their work was approved by institute directors at Tulsa Oct. 4.

The change in the institute resolutions of July 30* refer particularly to Sub-Division Five and apply to application of the code in Texas. It calls for the state sub-committee, or some other designated committee to function as a "committee on interpretation." In other states the institute resolution calls for state committees on conciliation which shall attempt to conciliate competitors where interpretation or complaints of violation of provisions of the code are concerned. In Texas the duties of the committee on interpretation are to aid in interpreting and to report disputes to the general Institute committee on interpretation, rather than to attempt itself to bring about an agreement among companies involved in a dispute.

The form of pledge adopted in Texas to be made to the Federal Trade Commission by companies marketing in Texas is as follows:

"The undersigned hereby announces to the Federal Trade Commission, and to the public, that it has adopted and until further notice to the Federal Trade Commission, will adhere to the rules embraced in the National Code of Practices for Marketing Refined Petroleum Products authorized by the Federal Trade Commission on July 25, 1929, as such rules are from time to time interpreted by the National Committee on Interpretation established by the American Petroleum Institute, or by the Federal Trade Commission, or by the courts. This action is taken as a matter of individual company policy and without reference to any other individual or company following a similar policy. We can make no agreement with others upon a policy, and therefore, can not sign the form of stipulation prepared by you and mailed to us."

*See NATIONAL PETROLEUM NEWS July 31, '29, page 20.

Refiner Buys Chicago Marketer

CHICAGO, Oct. 21.—The Agni Motor Fuel Co., retailers of gasoline and lubricating oils in Chicago and the suburbs, has just been purchased by the Globe Oil & Refining Co., Blackwell, Okla. For the present, at least, the officials of Agni will remain in charge.

The Agni company owns and controls 5 service stations, 2 bulk plants and between 150 to 200 resale accounts. They have storage capacity for approximately 300,000 gallons.

Vacuum Builds One-Stop Chain in Philadelphia

CLEVELAND, Oct. 22.—Vacuum Oil Co. about Nov. 1 will begin the marketing of gasoline under its own name at its own stations in the metropolitan Philadelphia district. The gasoline will be known as Mobilgas and Mobilgas Ethyl.

Vacuum has been engaged in marketing gasoline in northern Pennsylvania and central and western New York through its controlled Metro Stations, Inc., of Olean, N. Y., for several years and has been jobbing it for a year or more in the Philadelphia district.

Now the company is coming out under its own name and building its own stations of the one-stop type at which it will give lubrication service, brake testing, car laundering and possibly other automobile services.

The opening of its stations will be accompanied by an intensive newspaper campaign.

It will use a rapid meter type dispenser with a cuboidal modern art lighted capital with the word Mobilgas on each of the four faces.

A bulk station has been built on the Schuylkill river at Gibson's Point, Philadelphia, and the gasoline will be barged from the company's refinery at Paulsboro, N. J., on the Delaware river.

3 Ethics Code Recommendations Adopted by Penna. Jobbers

PITTSBURGH, Oct. 19

THREE recommendations on interpreting the code of ethics were adopted by the Pennsylvania Independent Oil Men's Association in convention here Oct. 15 and 16.

Recommendations were that 30 days be considered ample time for the first supplier to remove his equipment from a dealer's station or show that a contract had not expired, that 30 days be considered time for a "prompt response" under rule 3 on the first supplier producing information that a contract would be violated in painting over signs, and that all commercial discounts be eliminated at service stations. These recommendations are to go to the national committee through the state committee on interpretation of the code.

Installation of equipment, painting over of signs and stations, making loans to dealers, and commercial discounts were the most discussed rules in the session on the code of ethics. Thomas J. Hilliard, president of the Waverly Oil Works, Pittsburgh, led the discussion. The association voted to accept the code 64 to 1.

The first two recommendations were adopted to place a definite time on the first supplier giving information to the second supplier as to whether an existing contract would be violated in the removal of pumps or painting of signs at dealer stations.

Discussion on these points was spirited. On rule 1 several speakers proposed standardization of installation costs for stations in a definite district. This standardization was opposed by other speakers on the grounds that costs would vary by stations, depending on the quality of labor and material used.

Concerning loaning of money to dealers, several speakers pointed out that this might be an investment for the jobber if the dealer were to use the money to expand his place of business and to continue handling the jobber's products. Other speakers pointed out that there would be no way to control the money after it was loaned, and that such loans might be made to induce dealers away from a first supplier. It was brought out, also, that jobbers are in the oil business, and that it might be well to leave the making of loans to bankers.

The hitch on commercial discounts among the Pennsylvania jobbers was that on a charge account of a company operating commercial vehicles and pleasure cars used by salesmen two gasoline prices were to be used, as the discount would apply under the code only to vehicles licensed as commercial carriers.

Major oil companies were invited to join the organization, and the word Independent was stricken from the name through a change in the by-laws adopted at the final session. The name will be Pennsylvania Oil Men's Association.

Officers elected were president, Sam Cohn, Independent Oil Co., Altoona, succeeding W. M. Berlin, Economy Fuel Co., Greensburg; vice-president, J. G. Snowden, Lycoming Oil & Gas Co., Williamsport, succeeding Max Levinson, Peerless Gas & Oil Co., Philadelphia.

The convention voted to hold two meetings a year, the next meeting in Philadelphia in the spring.

A committee to urge jobbers to sign the code was appointed at the convention consisting of C. W. Gebhardt, Erie; Guy Sutton, New Castle; C. J. Suter, Tarentum; R. S. Newton, Emlenton; Wm. F. Lewis, Johnstown; T. M. Miles, Milton; D. Wollner, Lewistown; Ernest Zeigler, York; R. B. Phillips; Scranton; Robert Jenkins, Pottsville; D. R. Van Olinda, Reading; and Allen Langhans, Warren. Each man will appoint two other oil men in his territory to assist.

Speakers on the program Oct. 15 were James Rae, president of the Pittsburgh Chamber of Commerce, welcoming address; W. J. Robinson, Equitable Casualty and Surety Co., New York, on bonding; Lyon McCandless, research engineer, "What Measure Ye Meter by Meter," and G. B. Hunter, Sterling Oil Co., on "Gasoline." Discussion of the code of ethics was on the second day's program, followed by an address by Warren C. Platt, editor of NATIONAL PETROLEUM NEWS.

Entertainment was provided at a stag banquet the first evening, and dancing acts at the luncheon on the second day. Twenty-one equipment manufacturers had displays. Approximately 300 jobbers and equipment men registered.

New York Driver's Strike Ends, Unions Not Recognized

CLEVELAND, Oct. 19

THE strike of oil truck drivers in New York was all over this morning, P. P. Prunty, assistant general sales manager in New York for the Standard Oil Co. of New York, said. All the drivers have returned to work unconditionally, without obtaining demand for increases in pay and without recognition of the union.

Some of the smaller distributors in New York had recognized the unions early in the strike, but these agreements were reported as binding only in case the bigger companies took the same action.

Ability of the oil companies to distribute gasoline and fuel oil in spite of the strikers, and the refusal of other truck drivers to go out on a sympathetic strike brought about the collapse of the oil driver's strike.

The strike began 10 days ago at the Pratt station of the Standard Oil Co. of New York in Brooklyn. Drivers demanded an increase in pay of $12.50 a week and an eight hour day. A general strike on oil trucks was called Oct. 11 by the International Brotherhood of Teamsters, Chauffers, Stablemen and Helpers.

About 3000 oil truck drivers were on strike. Several smaller oil distributors were reported as reaching an agreement with the union shortly after the strike started. Standard Oil reported about 80 per cent of its drivers joined the union through threats and intimidation.

INDIANAPOLIS—W. H. and R. E. Trimble, whose names have been synonymous with the Western Oil Refining Co. here for 20 years, resigned Oct. 1 from the Shell Petroleum Corp. which recently took over all properties of the Western company.

While no definite plans have been announced by the Messrs. Trimble, they do admit that "it is mighty hard to be out of the oil business."

OAKLAND, Calif.—An oil burner show to celebrate its 25th anniversary was held recently here by the S. T. Johnson Co., manufacturer of oil burners. It was held in the retail display room of the company and was advertised widely through radio, direct mail and newspapers.

Home owners, architects and builders in the San Francisco bay district attended.

"Germ Process" Motor Oils to Be Announced by Continental

TULSA, Oct. 19

THE Continental Oil Co. is soon to place on the market a new line of motor oils under the brand, "Conoco Germ-Processed Motor Oils."

These lubricants are to have two distinctive features: they will be manufactured by the "germ process" and they will have extremely low cold test and a high degree of fluidity at low temperatures.

Much new equipment is being installed at the Continental refinery in Ponca City to produce the new line of oils.

The germ process consists, essentially, of adding to mineral oil a very small percentage of fatty acid such as oleic acid or stearic acid. The presence of this fatty acid or "germ" is said to give the oil greater "wetting" power to cover the bearing surface, the tendency to adhere to the bearing surface and to increase the "oiliness" by reducing the coefficient of friction of the oil.

The germ process was first heard of by American refiners almost 10 years ago when Henry M. Wells of England, who with J. E. Southcombe discovered the principles underlying the process, journey to this country to read a paper on his discovery before the spring meeting of the National Petroleum Association in Pittsburgh.

This was in April, 1920.

The Marland Refining Co. in 1922, bought exclusive rights to the germ process for North America. The company carried out considerable research on oils made experimentally by the germ process, using the oil both in passenger cars and trucks, but it was not until the recent development of the high compression, high speed engine began to complicate the problems of automobile lubrication that the decision was reached to place the product on the market as a superior oil to meet the exacting demands.

The coming appearance of the new line of lubricants was announced in the September-October issue of The Conoco Magazine, house organ of the Continental Oil Co., by J. E. Moorhead, sales promotion manager.

Mr. Wells while in the United States in 1923 at the request of government engineers, was quoted as saying that: "Ours is not so much an invention as a scientific discovery. It is a process which we call the 'germ process' by which the addition of a slight percentage of the essential element of fatty oil to mineral oil, which is naturally devoid of this property, practically changes mineral oil to fatty oil so far as lubrication is concerned."

Dr. T. E. Stanton of the Royal Aeronautical Society, in a lecture on "The Nature of Lubrication," was quoted about the same time as saying that "It was found that by the addition of as little as 1 per cent of oleic acid a reduction in the coefficient of friction of 17 per cent was effected. Increasing the amount up to 5 per cent did not effect any further improvement."

Mr. Moorhead states in his article that "it is characteristic that oils processed with the germ essence are given a natural attraction to metal surfaces. They spread quickly into a film, not only covering the smooth face of the cylinder walls and bearings but actually entering the interstices or pores of the metal. . . . It may be said that it does more than form a film on the metal, it actually becomes a part of the metal surface. . . .

"Theoretically, a perfect bearing, well flooded with oil will run without wear indefinitely, but man has not yet learned how to insure absolute, continuous-flooded lubrication.

"Conoco Germ Processed Motor Oil provides lubrication when the motor is started and while the oil system is beginning its operation, because once used, it never leaves the bearing and cylinder walls.

"Though the oil may drain away when the engine is idle, the filmy membrane which has penetrated into the metal surfaces remains. . . . Actual tests show that friction losses are reduced 26 per cent by the oiliness of Conoco Germ Processed Motor Oil."

Approximately 200 tons of refrigerating capacity are being added to the plant, Ponca City, which will bring the total to approximately 600 tons capacity. At the same time the wax and grease plants are being enlarged to handle the additional waxes which will be obtained from the lube oil stocks as a result of the low cold test process.

This process calls for chilling the lube stocks to around 50 degrees below zero, after they have been diluted with naphtha in the proportions of two parts naphtha to one part stock. The cold mixture is put through centrifuging machines which virtually dewax the stocks. The naphtha is removed by steam distillation. The dewaxing gives the finished oils a zero or lower cold test but does not remove any of the heat resisting qualities, it is stated.

Vacuum Oil Co. Buys Interest In Lubrite Refining Co.

ST. LOUIS, Oct. 21

THE Vacuum Oil Co. has purchased an interest in the Lubrite Refining Co. one of the most important marketers in the St. Louis district with its own refinery at East St. Louis.

Announcement of the purchase stated that "The Lubrite Refining Co. has joined with the Vacuum Oil Co. in the formation of the Lubrite Refining Corp. which is acquiring all of the assets of the Lubrite Refining Co." No information was given out as to the extent of the interest which Vacuum has obtained.

The new Lubrite company will continue under the same management as the old organization. W. W. Strickler, president of the old company, is to be chairman of the board of the new. H. T. Ashton, who has been vice president and general manager, is to be president of the new corporation. W. H. Ware who has been in charge of Lubrite sales is to be a vice president.

The company will continue to sell the products it has offered to motorists in its marketing territory and in addition will sell Vacuum products. It is understood that the Lubrite activities will be expanded as a result of the partial change in ownership.

The Lubrite has a 3000 barrel refinery at East St. Louis which is equipped with cracking facilities. The plant draws its crude from the Mid-Continent field through pipe lines of the Prairie Pipe Line Co. The company has a compounding plant and large bulk station at the refinery from which gasoline and oils are distributed by truck throughout St. Louis county. The distributing system of the company includes five bulk plants and 210 service stations.

The Vacuum Investing Corp., a subsidiary of the Vacuum Oil Co., is the organization which has bought into the Lubrite.

Rumors have been current for several weeks that the Vacuum has been planning to extend its gasoline retailing business. In the past it has owned the Metro stations in New York but its chief business has been in the refining and world-wide marketing of lubricating oils under its trade name Mobiloil.

Review of Late Production News

WITH proration lifted in Oklahoma City Oct. 12, production in that field mounted 74,450 barrels, resulting in a daily average output for the country of 2,903,200 barrels the week ended Oct. 19, a gain of 65,100 barrels over the previous week, according to the American Petroleum Institute.

Oklahoma daily output was 708,250 barrels the past week, compared with 650,550 barrels the previous week when Oklahoma City was producing but 1000 barrels daily.

Crude imports were at the rate of 317,286 barrels the past week, a gain of 64,286 barrels. Total new crude supply was 3,220,486 barrels, compared with new supply of 3,091,100 barrels the previous week.

California output gained 10,000 barrels, 8000 of which was in Santa Fe Springs.

Other larger gains in individual fields were one of 3350 barrels in Refugio county, southwest Texas; 2400 barrels in Hutchinson county and 2000 barrels in Howard county.

These decreases occurred: 5300 barrels in Earlsboro; 2600 barrels in Little River; 2500 in St. Louis and 2250 barrels in Mission; also 6700 barrels in Winkler county.

Texas, New Mexico, Louisiana

Current production in this country by pools is found on page 89.

CONTRACT arrangements are being perfected for percentage development of the acreage of other companies located inside the block where Pure Oil Co. brought in its new Van field in Van Zandt county, East Texas. Although no official announcements have been forthcoming, it is understood that Pure will drill and operate wells on the approximately 400 acres of leaseholds owned by the Shell, Sun, Texas and Humble companies southeast, east and northeast of the well.

The Pure well, which started off making 149 barrels an hour from the Woodbine sand, settled down to flow of 1600 barrels daily through 9¼-inch casing. A refinery test of the crude shows it to have a gasoline content of more than 29 per cent.

Operators in the Hobbs area of Lea county, New Mexico, were to meet Oct. 22 at Hobbs for discussion of plans to retard development in that part of the Permian salt basin geological province. On the Texas Pacific Coal & Oil Co. block, farther west in Lea county, its No. 2 state test, 21-23S-36E, flows a 30-barrel head every three hours at 3705-3712 feet. It is rated a 250-barrel well.

Interest in Louisiana operations was confined to the Dixie area of the Caddo district, near Shreveport, where about 30 wells have been completed in the last few months. These completions have varied from 200 to 800 barrels initial production, generally, with occasional larger yields.

California

THE most important development in the California production situation was the drastic cut in prices for crude in the flush fields which was announced Oct. 21 by the Standard Oil Co. of California and met by other important buyers. Rumors had been current for some time that a reduction was on the way unless protestants agreed to observe the law and end the burdensome overproduction.

Daily average production for the state of California was boosted 11,300 barrels for week ending October 19. This increase was due to several completions in the deep sands at Santa Fe Springs and to two completions in the Elwood field.

Producers in the O'Connell zone at Santa Fe Springs suffer natural decline that is hardly overcome by other wells put on production in the underlying Clarke sands. Over 60 wells are drilling into the Clarke sand and it is expected that their successful completion in the near future will prevent any substantial reduction in the field's total.

Failure on the part of Ohio Oil Co. to bring its well on the south dome of Kettleman Hills in as an oil well has caused considerable speculation as to what may be expected of this area in the future. The well was killed after being completed as a hot salt water producer.

Interest has picked up in the Signal Hill section of the Long Beach field by recent completions and increased drilling is expected.

Oklahoma-Kansas

WITH two new wells whose initial productions exceeded 700 barrels per hour the Oklahoma City pool set a new peak of 89,653 barrels. This figure would have been exceeded the next day had the wells not been shut in after 24 hours production in accordance with the operating agreement covering the field.

With no new areas discovered, Oklahoma still continued to complete wells which will call for further drilling, and which emphasize the need for the state-wide reduction in production now being effected. A well making 100 barrels an hour from the Wilcox sand in the area between the St. Louis and Pearson Switch pools is one such. Although there are nine wells in the pool, this is the first to produce in the Wilcox. Its performance will be closely watched.

A new pool in the Simpson formation west of Wichita, Kan. appears as the opener of a new area in that state. The hole is standing full of oil, slopping over about 150 barrels per day, but as it is to be shut in for 30 days, its full importance can not be told. It is producing from the same formation as the original Wright pool of Sedgwick county.

Wyoming, Montana

THE Vanalta well on the International border between Montana and Canada produced 61 barrels on the pump, and is considered an important discovery, both for the Montana industry and the Canadian.

The Tensleep sand in the Hamilton Dome field in Wyoming has been proved commercially productive by a well drilled deeper from the Embar by the Empire State Oil Co. The Skelton Dome test, in Hot Springs county, has been abandoned by Texas Production Co.

Midwest Refining Co. has abandoned its wildcat well on Chimney Creek structure in Routt county, Colorado at 1732 feet. Mountain Fuel Supply Co. (Ohio Oil) is starting a test for gas and oil on the Powder Wash structure, Moffat county, southeast of Hiawatha Dome.

Growing "Sink" in Sour Lake Field Results from Salt Solution

By Paul Wagner
N. P. N. STAFF WRITER

HOUSTON, Oct. 18

THE sloughing away of the earth's surface, into a "sink" that appeared 10 days ago in the Sour Lake oil field of Hardin county, Gulf Coastal Texas, continued at a lesser rate in the present week.

Pool of water and oil scum in center of Sour Lake depression caused by solution of salt in sub-surface of Gulf Coast dome field

A depression estimated to be 150 feet deep at its center had filled with water and oil scum over an area approximating 10 acres. Seven or eight times that scope of territory was included inside the periphery of the depression and huge earth cracks extended for a distance of a half mile, or more, east to west, through the "sink."

The phenomenon, although not new to the Gulf Coastal salt dome region, lacks direct parallel with other extraordinary occurrences of the past.

In the case of the Sour Lake depression, geologists and engineers are agreed that the solution of salt in the dome structure reached a stage where the thin caprock below the surface in the affected part of the field could no longer sustain the weight of surface formations.

Similar phenomena at the Big Hill dome, Matagorda county, Texas, and at the Sulphur dome, Sulphur, La., resulted more gradually from removal of vast quantities of sand or sulfur.

At Goose Creek, where approximately 100 acres of the Gaillard peninsula was submerged several years ago, the inferred salt dome is so deeply seated that drilling for oil has never penetrated the saline core. There, it was concluded[1] that subsidence was caused by the extraction of oil, water, gas and sand from beneath the surface.

In the case of Spur Lake the affected area was the scene of the field's shallowest caprock development, at depths of 400 to 800 feet, from 1902 to 1913. Blowouts, sand removals and casing collapses are believed to have allowed circulation of water that dissolved the salt core by solution and brought about the weakening that finally resulted in the present collapse of the surface formations.

Sinking of the ground began in the Brooks sub-division of five and ten acre tracts about 6 o'clock in the morning of Oct. 9. By the following day a crater had formed, about 1000 feet in length, 600 feet wide and 80 feet deep. Later, the sloughing extended west to within 30 feet of the Gilbert fee property operated by the Gilbert Co., of Beaumont, the depression becoming nearly circular.

No wells recently producing were located inside the depression, but some of the Gilbert Co.'s wells are on the west brink of it. Similarly, The Texas Co.'s No. 1 Oliver, on the south brink, toppled from the earth's sinking.

[1]—Wallace E. Pratt, Humble Oil & Refining Co., and Douglas W. Johnson, Columbia University, in Journal of Geology, Vol. 34, No. 7, part 1, October-November, 1926.

Incline of lease equipment on east edge of the Gilbert Co. property, west brink of depression

An effect of the phenomenon was to increase production of one of the Gilbert Co.'s wells from 10 to 50 barrels daily. Later, however, it increased its flow of salt water and was abandoned. Other wells adjacent to the crater increased their flow of oil or salt water, an increase in one such element usually being accompanied by a decline in the other.

As late as Oct. 14 a new crater began forming inside the north-northeast part of the earlier depression, maximum depth of approximately 150 feet being attained in the "sink" on the following day.

The Rio Bravo Oil Co., whose Sour Lake-Saratoga pipeline system crosses the crater, lost about 250 feet of line because of the earth's sinking. Prompt action in pumping out the oil and opening the line at the Dresser sleeves saved greater loss.

Some old equipment on the ground was also lost and damage was experienced by the "swinging out of plumb" of derricks and other equipment adjacent to the depression. Physical loss, however, was not great.

Artificial Gas Is Successfully Stored Underground

ATLANTIC CITY, Oct. 18

THAT manufactured gas be stored in depleted, or partly depleted, oil and gas bearing formations underground, to save the gas companies the expense of above ground gas holders, was proposed to the American Gas Association convention at Atlantic City this week, by S. W. Meals, president of the Carnegie Natural Gas Co., Pittsburgh.

"I wish to present to our industry a new idea which I believe will not only prove a panacea for many manufactured gas operations, but a great help in the future to the natural gas and oil industry," said Mr. Meals, in launching his proposal.

"Manufactured gas can be properly cleaned and stored in depleted, or partly depleted, oil and gas bearing formations in the earth, recovered when needed and, due to the hydrocarbons still remaining in the sands, the gas recovered will be considerably heavier and richer. The lean gas, having affinity for the richer hydrocarbons, will recover and remove from the sands valuable fuel that would otherwise be entirely lost."

Mr. Meals went on to say that a Pittsburgh gas company, having secured all the wells and royalty interests in a gas field, experimented in storing manufactured gas in one of the deep white sand formations. The entire production from this field, before manufactured gas was injected, was close to 500,000 cubic feet a day under vacuum.

"Thirty-three million cubic feet, of about 580 b.t.u. gas, was injected into a few wells," he said. "Later over 37,000,000 cubic feet was withdrawn. About 20,000,000,000 b.t.u.'s were injected and 32,000,000,000 recovered, or an excess equivalent to 12,000,000,000 cubic feet of natural gas.

"The formation in which this gas was stored was found at a depth of about 3000 feet; close to 10 feet of the sand was open to pay sand, the porosity of which was over 20 per cent. The pressure required to force the gas into the sand varied from 30 to 70 pounds, the variation being due to friction in the tubing. The temperature in the sand was 85 degrees F. and at all times the flowing gas injected was cooled below this figure.

"I am of the opinion that depleted oil sands will prove even a better storage than gas sands, provided the sands are free from water."

For the manufactured gas industry to take advantage of the earth's natural storage reservoirs, Mr. Meals said it may require the gas to be manufactured at the mine, stored nearby, and later pumped to the markets, as the oil and gas fields are usually in the same area in which the coal fields are being operated. He said in Germany it was proposed to generate gas at the mines in the Ruhr valley and supply the gas at high pressure to cities more than 200 miles distant.

Urging the management of the manufactured gas companies to investigate the possible economies in underground storage, Mr. Meals said it may even be shown economical for the gas companies to send their gas to relatively distant underground storage and then to return it as needed. He said a study of comparative investments and operating costs under the two methods of storing manufactured gas was needed.

Mr. Meals said it was now estimated that over five per cent of the entire investment in the manufactured gas industry is in gas holders, that there are about 12,000 in this country, with a rated capacity on Dec. 31, 1927, of 1,225,930,000 cubic feet. Since that date, he said, a large number of from five to 20 million foot holders of the waterless type have been built and that increaesd holder capacity is doubtless needed in many places.

"The largest natural gas storage field of which we have knowledge is located in central Kentucky," said Mr. Meals. "The formation in which the gas has been stored is found at a depth of less than 1000 feet and covers an area of about 27 square miles, with about 80 wells. The gas is metered as it is injected into the sand. It requires 218,000,000 cubic feet to raise the rock pressure one pound and if this amount is withdrawn, it reduces the rock pressure one pound. About 8,000,000,000 cubic feet of natural gas has been stored in a natural storage reservoir. This one storage field with a pressure of 70 pounds holds more than six times the total of all the manufactured gas holder capacity in the United States.

"The Zoar storage field 30 miles south of Buffalo, New York, is a valuable asset to the company supplying gas to Buffalo. There are 23 wells in the field and with 50 pounds differential over line pressure, 10,000,000 cubic feet per day can be taken out to meet their peak demands."

Hobbs Area Locations Are Delayed

HOUSTON, Oct. 19.—Shell Petroleum Corp., and Texas Pacific Coal & Oil Co., both of which had made locations for tests northwest of the Humble Oil & Refining Co.'s No. 1 Bowers well in the Hobbs area of Lea county, New Mexico, have temporarily abandoned drilling operations pending curtailment conferences.

A conference at the inland town of Hobbs has been called for the afternoon of Tuesday, Oct. 22, at which time it is proposed to thresh out details. Most companies interested in the area are reported favorable to operating curtailment, since no pipeline now serves the Hobbs territory and active exploitation would necessitate storage construction for crude.

Only townships 18 and 18 south, range 38 east, Lea county, are involved in the present program.

Another well to show oil in the Hobbs area was reported at the end of the week. It is the Ohio Oil Co.'s No. 1 state, 9-19s-38e, in which 3000 feet of oil rose in the hole at total depth of 4185 feet, five feet in pay. The pay is 154 feet lower than the Midwest Refining Co.'s Hobbs-state discovery, completed more than a year ago for 840 barrels, maximum daily production.

Other wells capable of production in the Hobbs area are the Midwest's No. 1 Leech, 15-19s-38e, which made maximum flow of 810 barrels at 4166 feet; Walker Oil Co.'s No. 1 Terry, 10-19s-38e, which flowed 475 barrels at 4155 feet, before being shut in Oct. 8; and Humble Oil & Refining Co.'s No. 1 Bowers, 30-18s-38e, which flowed approximately 500 barrels daily from an upper pay at 3143-3149 feet, but has never been completed in the main producing horizon of the area.

Oklahoma City Pool Is Not Injured By Its 30-Day Shut Down

By William F. Lowe

N. P. N. STAFF WRITER

OKLAHOMA CITY, Oct. 20

THE Oklahoma City pool came out from under the covers on the morning of Oct. 12, considerably refreshed after its 30-day enforced rest.

With one exception, all the 14 wells eligible to start on that date were as good as before the recess began.

In some cases they were better, and the first 24-hour gauge was 63,838 barrels, or 9236 barrels higher than their total the last day before the shutdown.

The exception noted was the Indian Territory Illuminating Oil Co Foster No. 1 S. Bodine, NW 30-11-2W. Its gauge on the day previous to being closed in, was 617 barrels of oil and 1667 barrels of water. On being opened Oct. 12, it was not only slow in starting but flowed only for seven hours, making a total of 532 barrels of oil and 328 barrels of water before going dead.

This decrease in the water might have been an encouraging sign had not the well ceased to produce even that. This fact, added to its peculiar method of dying by heads, gave rise to the opinion that, during the shut down, water deposits had clogged the sand. The well is now being cleaned out to deepen.

One well, the I.T.I.O. No. 2A Bodine, C NW SE 24-11-3W, was decidedly benefitted by the rest period. This well was originally drilled to a total depth of 6475 feet with rotary tools. The 4-inch casing was cemented at 6121 leaving 354 feet of open hole below the pipe. In knocking out the cement plug with cable tools, the whole string was lost, and before it could be recovered the well blew in.

It is now thought that the enormous pressure below the tools jammed them up near the casing shoe and obstructed the passage of oil. If this condition did exist, it is reasonable to suppose that when the well was shut in and the pressure was equalized in the hole, they would drop to the bottom. Be that as it may, the production of the well on Sept. 12, was but 3480 barrels, and two days after being opened up on Oct. 12, it made 6009 barrels. This figure is over 2000 barrels higher than any previous gauge.

Everything comes big at Oklahoma City. A 100,000,000 cubic foot gasser, with a rock pressure of 2100 pounds, lighting up a gasoline plant along side

The satisfactory performance of the wells after their 30-day shut down is more important than in its effect on this pool. The question of what would happen to a field that was shut in has been debated for years. There were those who asserted the field would be "ruined." Other were equally positive that, if the entire pool were shut in simultaneously, with no dissipation of pressure permitted through wells remaining on production, no change in the status of the wells would be possible.

The results in Oklahoma City pool vindicate the latter contention.

The production of the 14 wells opened Oct. 12, was several thousand barrels below the peak for the field, which was made on Sept. 11, just before the closing order went into effect. This difference is due to the fact that three wells were producing, though not considered complete, and their opening dates were delayed a few days after Oct. 12.

All three have since been put on production and have more than verified the early predictions as to their capabilities. The largest of these, the Hall-Briscoe No. 1 Childs, 14-11-3W, bottomed in the so-called detrital zone at 6334 feet, was originally estimated as good for around 5500 barrels. Its first full 24-hour gauge, when opened recently, was 7457 barrels. The production of these wells brought the total for the field to a new peak of 79,085 barrels, three days after the pool was opened.

Four other wells are shut in taking the 30-day count, while 18 more are drilling below 6000 feet. Barring accidents, the latter should be ready to demonstrate their ability not later than Dec. 1. Two of them already have fishing jobs on their hands and in the deep holes of the Oklahoma City pool, these are real jobs.

As operators have become more familiar with the drilling conditions of this field, the accidents causing delays have been decreasing. Experience has thoroughly taught many lessons and the result has been a very considerable cut in the drilling time. Six months was about the best time made in getting down the early wells, but four months is now the average.

Much of the early delay was due to the fact that the company geologists needed more and better samples. Cores were taken of almost every horizon and, though this process is not so slow in itself, it made necessary a

large amount of straight reaming. It is very probable that 30 days of the total drilling time on the early wells was used in acquiring geologic information. This may be overestimating a little, but even if it were entirely true, the time cannot be said to have been wasted.

In actual drilling practice, perhaps the most helpful step taken to reduce the time between spudding and drilling in, was lowering the casing point of the 9-inch string. The seat chosen on the first wells was above the Layton sand at a depth of from 5000 to 5100 feet. The custom was short lived, however, as drilling contractors soon found that this formation was responsible for many of their troubles.

The Layton sand, in the Oklahoma City pool, is a soft sand with a nasty habit of caving. It contains gas in sufficient quantity to aerate the rotary mud, thereby causing it to lose its effectiveness in preventing a cave-in of the soft walls. Fishing jobs became less numerous when the pipe was carried through the Layton, the present practice being to cement around or below 5200 feet.

Drilling into the detrital zone, where the rock pressures are upwards of 2000 pounds per square inch, was the most difficult problem to solve. Gas blow-outs from this horizon with their attendant difficulties, made more than one engineer and driller wish for a transfer to a less active front.

Cable tools were entirely ineffective in the heavy mud necessary to hold a balance of pressure in the hole. The bit might rise with the beam but its fall was a leisurely procedure that accomplished very little. This method of drilling was early abandoned not only as being too slow, but also too dangerous and destructive.

Even with rotary tools, blow-outs were not entirely absent. It was not until an intensive study was made of mud fluids that the big gas zone could be approached with anything like peace of mind. The engineers of the Indian Territory Illuminating Oil Co., by exhaustive tests, have found that mud mixed to a consistency weighing from nine to 10 pounds to the gallon is sufficiently heavy to meet emergencies.

Even this weight of fluid, in a 6000-foot hole, does not leave a very large safety factor, and considerable care must be taken to keep the fluid up to the proper standard. Tests are now made once an hour, or at least several times a tour, by the engineer in charge and the contractors are instructed to keep the mud fairly uniform.

It is decidedly to their advantage to do this, even without supervising, for the frequent gas pockets encountered can aerate the fluid rapidly. The result is a blow-out of no mean proportions, and another delay in completing the well.

When wells have reached a depth below 4500 feet, drilling operations are slowed down intentionally. No attempt is made to get footage, for from one to two feet per hour is considered a safe and sufficient speed. There is no "washing them down" as the boys love to do in Gray county, Texas. Over there, the morning tour crew thinks the evening tour driller overworked the lazy bench if he didn't make at least 200 feet.

Most of those holes go "off towards Jones's" too. But getting them straight in the Panhandle is not as easy as it is at Oklahoma City. There is only one well in the latter field that is as much as 10 degrees off the perpendicular. Drillers make good time in the upper 3000 feet, but the holes are being surveyed regularly with the acid bottle to keep the crews from getting too ambitious.

Considering the amount of gas in the wells and the difficulties of keeping the big pressure under control, it is rather remarkable that there has been only one fire. However, when they did finally get this one started it was on the same generous scale as the rest of the operations. They are not pikers at Oklahoma City, even in the flambeau business, as the accompanying illustration will show.

The company that was so unfortunate as to have this accident was the Sinclair Oil & Gas Co., the well being their No. 3 Stamper, 30-11-2W, a 100,000,000 cubic foot gasser. There were no fatalities, but its proximity to the same company's gasoline plant and storage tanks, caused a certain amount of nervousness among the workers.

The "City" pool may eventually reach the proportions of another overproduction menace to the industry, but so long as the present pro-ration, or shut in schedule, is in effect its rise will be slow. By the time it reaches the predicted 250,000 barrels per day, if it ever does, most of the danger of its getting the market in a jam should be over.

Strang Gets Term in Federal Prison

HOUSTON, Oct. 19.—Fred Strang, Fort Worth oil stock promoter, was sentenced to three years in the federal penitentiary at Leavenworth by Judge William B. Sheppard at Fort Worth, Oct. 12. Sentence was on the first count of an indictment under which he had been convicted of mail fraud in connection with Carter county, Okla., acreage. He was given suspended sentence of five years on four other counts.

Strang gained notoriety in the public prints through his attacks on the federal government postoffice department, which he charged at Washington had "oppressed" promoters, whom he chose to call oil men; also he was active in propaganda before the Texas legislature last spring when promoters attempted to have the general assembly memoralize congress for an investigation of federal activities.

In sentencing Strang, Judge Sheppard described the postoffice system as "the nearest thing to a really democratic organization which exists in our Nation."

Continuing, he said that "until Congress provides for a department whose duty it shall be to halt misuses of the mails when it begins prosecutions for violation of rules for its use will continue.

"I regret that artifices to defraud through use of the mails are allowed to continue for so long. During nearly a quarter of a century on the bench, I have always believed that celerity and certainty of punishment is of more benefit to both the public and the culprit than the imposition of long sentences."

First Aid Contest to Be Held at Shreveport

TULSA, Oct. 19.—The first annual first aid contest for the Arkansas-Louisiana division of the Mid-Continent Oil & Gas Association will be held at Shreveport on Oct. 8. The contest will be one of the features on the Louisiana State fair program. A banquet will be held the same night at which time the awards will be made.

Several teams from that district already have been entered in the contest, and others probably will be entered before Oct. 8, according to Don Wallace, safety director for the association. The Shreveport contest, however, will be directed by T. J. O'Sullivan, assistant secretary for that division. Mr. Wallace will be the principal speaker at the banquet.

Reid Honored by Natural Gasoline Association

TULSA, Oct. 19.—The Board of Directors of the Natural Gasoline Association of America recently voted to present $500 to Walter Reid of Dallas, inventor of the Reid Vapor Pressure testing method as a token of appreciation for his valuable research work in developing his invention.

The method recently was approved at a meeting of the I.C.C. at Atlantic City. The method was adopted by the Natural Gasoline Association almost 18 months ago.

The Association several years ago offered $500 for the development of a satisfactory method. Several were submitted and some controversy developed. The Association accordingly withdrew its offer in 1927 and had not since that time renewed it.

Crude From Pure Oil's New Texas Field Shows 29% Gasoline

By Paul Wagner
N. P. N. STAFF WRITER

HOUSTON, Oct. 17

REFINERY analyses of crude petroleum from the Pure Oil Co.'s discovery well of the new Van field, 12 miles south of Grand Saline, in Van Zandt county, East Texas, show it to have a gasoline content of 29.11 per cent, testing 60.3 A.P.I. gravity when run to 424 end point.

Gravity of the crude tested 36.9 degrees at 81 F., correcting to 35.4 degrees at 60 F., the A.P.I. gravity determination. Color of the crude is brown.

Other than gasoline, products of the crude showed in refinery tests as follows:

Kerosene—8.40 per cent of 43.8 gravity.

Gas oil—20.83 per cent of 32.4 gravity.

Cracked wax distillate—15 per cent, 353 viscosity at 100 F.

Fuel oil—24 per cent at 12.7 gravity, viscosity 1285 at 122 Furol.

As the crude was run exceptionally low, it is estimated that different treatment would show a 30 per cent Bunker C fuel oil content.

A refining loss of 2.66 per cent was shown in the tests mentioned.

The well, No. 1 W. T. Jarman, completion of which was previously reported in this periodical,[1] settled down to 1600 barrels daily later in the week after it was first turned into field tankage, Oct. 14.

Initial flow of the well from the Woodbine sand horizon, as originally reported, was 149 barrels the first hour and 132 barrels the second hour. On the basis of its original behavior, the well was then estimated good for 3500 barrels daily from total depth of 2710 feet.

As the well was flowing through 9¼-inch casing, set at 2587 feet, it was believed at the end of the present week that its production might be materially increased by setting 4-inch tubing in the bottom of the hole.

Core drill interpretations and seismograph maps of the area indicate the Van structure is of domal type, dipping sharply away from its subsurface high point, though positive evidence of salt plug characteristics is lacking.

The structure is in a general area of many interior salt domes. Such of these as had been known from surface indications for years had failed uniformly to produce oil after extensive testing. More than two years ago, the Boggy Creek salt dome, approximately 40 miles southeast of the Van area and astraddle the Anderson-Cherokee county boundary, was brought into Woodbine sand production by Humble Oil & Refining Co., for itself and partner, the Rio Bravo Oil Co.

Nearly 50 miles southwest of the Van area, nearest Woodbine sand production is in the Corsicana district of the Mexia-Powell fault zone. In an easterly direction, the nearest oil production is upwards of 100 miles away in the western part of the Caddo, La., district.

Some geologists believe the Van structure to be associated with faulting, but apparently the conditions prevailing differ from those found in the Mexia-Powell fracture zone, which is subsidiary to the major Balcones fault system; if the structure is of salt dome origin then the saline plug is believed to be deep-seated in contrast with others of the East Texas region; or, should the structure reflect usual anticlinal conditions of folding then an unsuspected uplift of unexplained character may have been discovered.

At the time this was written no definite program had been reached for holding back development in the Van area. It was certain, however, that on the basis of present known conditions there would be no highly competitive operations to result.

Aside from some 400 acres owned by others inside the Pure's block of 17,000 acres in the Van area there were no outstanding leaseholds closer than the Humble Oil & Refining Co.'s 10,000 acre block to the northeast.

The Texas, Sun and Shell companies own most of the acreage east, southeast and northeast of the well. Shell was reported at the end of the week as making an east offset to the discovery and wells were expected to be drilled by The Texas and Sun companies.

A test was also proposed on a three-acre tract of W. E. Morris land, adjoining the townsite of Van, by the Roberts Oil Co., of Breckenridge, who acquired it from Roy A. Reynolds of Fort Worth. This tract is approximately 1200 feet southeast of the discovery well.

The nearest shipping point to the Van area is Grand Saline, on the Texas & Pacific railroad, approximately 90 miles east of Dallas and roughly 125 miles west of Shreveport.

Site for a tank car loading rack, including several hundred acres belonging to J. E. Person and his son, Earl Person, has been tendered the Pure at Grand Saline. It is more likely, however, that pipeline connections will be made to the field by extension of a lateral northeast from the Corsicana district. Prairie Pipeline Co. is reported already soliciting the Pure for connections.

Van crude, having similar characteristics to other Woodbine oil produced in East Texas, and showing equal or better gasoline content, will serve further to supply the Pure's raw material requirements for its Smiths Bluff refinery, in the Beaumont district.

The Smiths Bluff refinery is connected to other Woodbine oil fields of East Texas by the Pure Oil Pipeline Co. system, which was built by Pure in association with the Humphreys Corp. interests in Mexia development days, but later was sold to the Prairie Pipeline Co. Under contract arrangements the Pure Oil Pipeline Co., though now wholly owned by Prairie, gathers crude and makes deliveries for the Pure Oil Co.

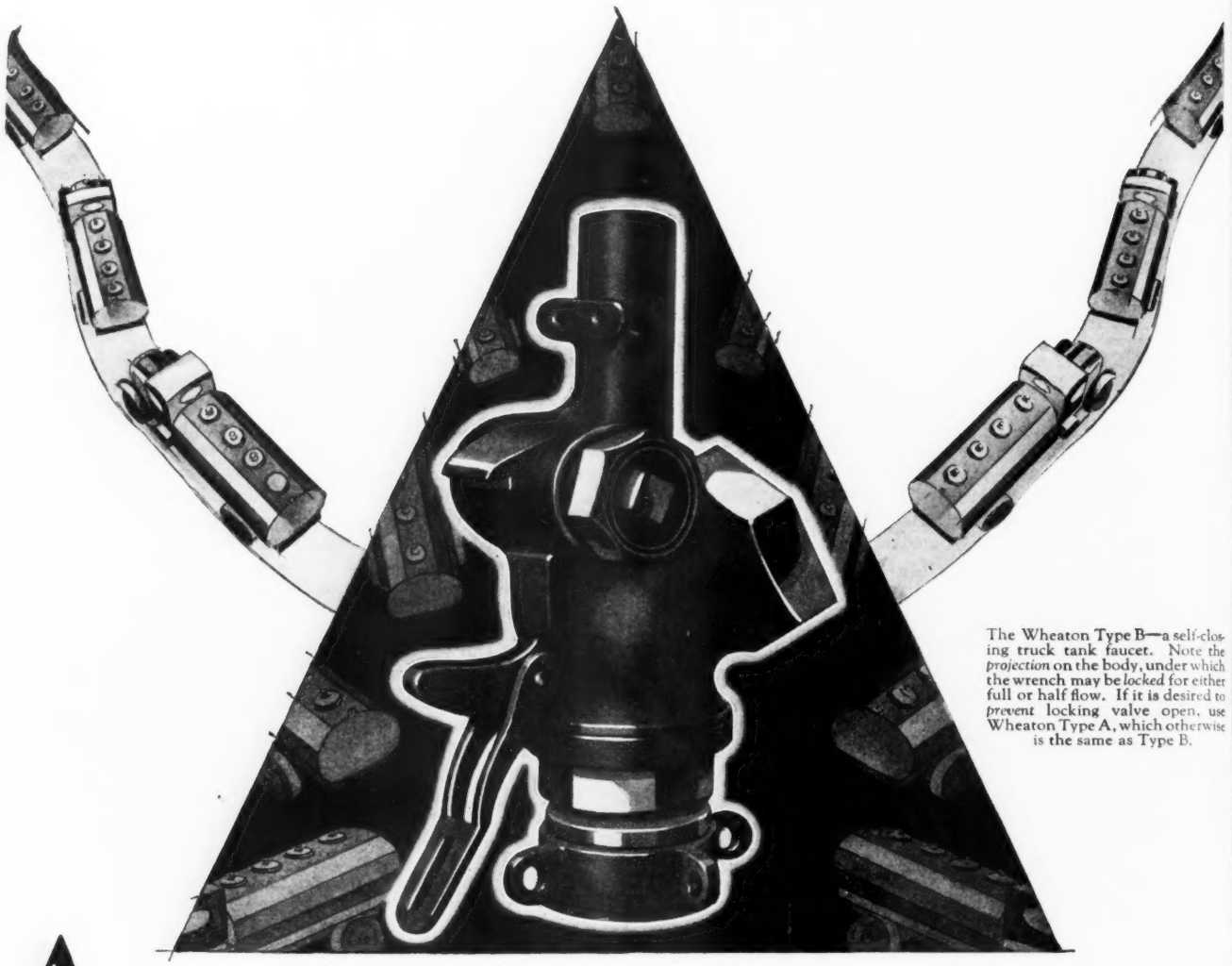
By Telegraph

HOUSTON, Oct. 21.—Arrangements are being perfected for contract development by the Pure Oil Co., of acreage belonging to other interests adjacent to the discovery well of the new field in Van Zandt County. Details have not been announced but are said to call for the drilling by the Pure on a percentage basis of future wells to be put down on acreage belonging to the Shell, Sun, Texas and Humble companies within the inferred contours of the structure as mapped by geologists.

Latest estimates credit the Pure with approximately 85 per cent of the acreage assumed to be productive in the area.

TULSA—A heart disorder resulted in the death of B. H. Waters on Oct. 15 at the age of 75. Mr. Waters was the father of M. F. Waters, president of the newly organized Hanlon-Waters, Inc., distributor of oil field and refinery supplies and specialties. Besides M. F. Waters, he is survived by two other sons, and a daughter, all of Tulsa.

[1]—NATIONAL PETROLEUM NEWS, Oct. 16, 1929.



The Wheaton Type B—a self-closing truck tank faucet. Note the *projection* on the body, under which the wrench may be *locked* for either full or half flow. If it is desired to *prevent* locking valve open, use Wheaton Type A, which otherwise is the same as Type B.

America's Greatest Oil Companies are RIGHT!

By their purchases during the last decade and a half, America's greatest oil companies have shown a distinct preference for Wheaton Truck Tank Faucets. In their *continued* selection of Wheaton—after so long an experience—they must be RIGHT! * * * One of the most popular Wheaton Faucets with many of these companies is the Type B, pictured above, made of special analysis bronze—tempered, toughened and tested, and perfectly fitted and finished. * * * Send for a sample of Type B today. Give it your own test. If you are not entirely satisfied, you may return it for credit or refund.

A. W. WHEATON BRASS WORKS
Newark, New Jersey

Empire Brass Mfg. Co., Ltd., London, Ontario, Canadian Manufacturers and Distributors

Wheaton

FAUCETS · VALVES · JOINTS · COUPLINGS · FILLERS · NOZZLES · FITTINGS

The Editors' Viewpoint

National Petroleum News

After the Sale—What?

"President, vice president, or major executive available —has just sold his sizable business and is now looking for something else to tackle—"

Such is the headline and the opening paragraph of a full page ad in a recent issue of a business paper. With all the sell-outs and mergers that are going on in the oil business today, one can't help but wonder if he is an oil man.

At all events, one can't help but feel a bit sorry for him. Perhaps he made a great deal of money in selling out his business. Perhaps he had to sell it. At all events, here he is divorced from the business and enterprise that he has been associated with for years and perhaps has built or helped to build and he has no place to go with his time and energy, to say nothing of his money.

It is fine to think of selling out, making a lot of money and putting it into safe bonds and then taking a rest, but after one has taken a rest, which one may find is sufficient after only a few weeks or months have elapsed, then—how about it?

Is one going to spend the rest of his life resting and if so, resting at what?

Man was not made to rest. He was made to work from the day he is able to toddle until they put him in his grave. The amount of the work and the character of it may vary according to his age and physical condition, but work he must. Even nature itself demands that he work if he would keep his body fit and his mind active.

Few men indeed have so trained themselves during their active business careers that after they have found it desirable to dispose of their business and retire from that form of activity, they have the mental capacity to indulge in another form of activity which possibly to them may be more pleasurable, while less exacting, such as social work, running a farm, intelligent traveling and study and so on. Most men have so developed that when they "retire," they find they must sit on a shelf until Father Time knocks them off into a ditch six feet long and three feet wide.

We sometimes wonder if this era of alleged mergers which is pointed to by alleged economists as an efficient trend of the times, may not be in fact more an era of poor thinking and short-sighted action on the part of the average business man, an era due to the ignorance of the average business man as to what he will do when he stops and "rests."

This advertisement indicates that one man at least is going back into business. Evidently therefore, the "economy" which prompted somebody to buy him out does not apply to whatever line of business he is going to enter because seemingly he desires to enter it as an individual operator, magnifying presumably competition in that particular line of industrial activity.

And one last parting thought of the man who retires and then re-enters business—many times we see him entering a business in which he has had no training. How many times does he keep his money after a few years of such an adventure? Few men who are trained in one line of business have found that they can operate with profit in another line of business.

So we suggest to the oil man who sells out that he might first pause and ask himself what he is going to do with his time and energy. He need not worry much about his money because somebody else will probably take care of that for him, even to taking it from him. —W. C. P.

Keeping the Market In the "Rough"

TO BORROW a metaphor from golf, the provision in the code of ethics not to require the posting of gasoline prices to commercial users who are given the courtesy of charge accounts, puts the entire code in the "rough."

A sound merchandising structure for gasoline cannot exist with a multitude of secret prices given commercial accounts. This class of business in the past has caused as much trouble in our industry as any other of the hundred and one unethical practices which the code was intended to eliminate. It will cause as much trouble in the future unless commercial discounts are brought into the open where all may see.

There is no good reason why it is unethical not to post the price which John Jones, filling station operator, pays for his gasoline but ethical not to post the price at which John Jones, Ford trucker, pays for his.

Failure to post the amount of commercial discounts will lead to failure to post the discounts to buyers other than operators of trucks, busses, taxicabs or other vehicles that operate under commercial licenses. The major, integrated companies cannot expect the small companies with limited distribution to sit calmly and see the local gallonage of national or other commercial accounts get away from them. The small companies will eventually cut their prices to get the business and before long the gasoline market structure will be back where it was when the drafting of a code of marketing practices was begun.

The sentence in Rule 17 of the code which exempts posting of commercial discounts, is recognized as a compromise but it was an unfortunate compromise that may nullify a large part of what it was hoped the code would accomplish—elimination of secret price cutting which always preceded unprofitable open price cutting.

The exemption of commercial discounts from price posting is now in the code. It will be difficult to remove it, but in the interests of the entire industry some effort should be made by the American Petroleum Institute when it meets in Chicago in December to eliminate this objectionable clause. The National Committee on Interpretation of the Code cannot erase it but the institute can set in motion the machinery which will remove it.

Unless the industry's sanction of this "ethical" secret price cutting is withdrawn marketing is sure to stay in the "rough."—R.B.S.

CHIEF policy matter to come before the directors of the American Petroleum Institute in December at the Chicago annual meeting is that of unit development of oil pools. Splendid impetus has been given the movement within the past year. Unit operation is in practice in many places and in time will be standard method of handling any new area, as well as many older ones.

Along with the expected endorsement of unit operation by the directors of the A. P. I. a study is going forward by a committee appointed two weeks ago by Dr. J. B. Umpleby, chairman of the petroleum division of the American Institute of Mining & Metallurgical Engineers. This committee will report in February at the annual A. I. M. E. meeting in New York. If the result of the committee's labors is a complete compendium on the course to be followed in pooling of acreage under common management, the date when unit development is standard practice will have been reached much sooner.

* * *

It appears that there is no use any more dismissing a deep discovery with the assertion that it will be months and months before more completions can be put into the producing list. The first well may require a year to drill, due to care that must be exercised in getting through unknown formations. But the next one will be a different story. In the Oklahoma City pool this is well illustrated. Considerable time has been cut off the original drilling period and still more will be saved as development goes along.

Incidentally, a fine record was made by J. E. Mabee, drilling contractor of Tulsa, in putting down the Glidden wells for T. B. Slick, in Oklahoma City pool. On No. 1, the surface pipe was set July 13 and in 37 days the nine-inch pipe was landed at 5293 feet. In No. 2 Glidden, surface pipe was landed July 21 and in 34 days the nine-inch was landed at 5207 feet. The first 20 wells in the field averaged close to 65 days in setting the nine-inch at 5200-5300 feet; this was reduced to an average of 50 days.

* * *

Complaining a day or so ago to Frank Billings, the intrepid wildcatter, at the lack of hot news, he suggested that we fall back upon the methods of the new graduate of the school of journalism that Mr. Billingslea had just heard about.

The young man applied to a city editor for a job. "What," said the editor, "are you best at doing?"

"Well," said the fledgling, "in school I was considered best at invective."

"Yes, but be more specific," the editor urged.

"Oh, just general invective," was the proud assertion.

* * *

Elmer Corn, of Wichita, is manager of the Plains Oil Co. which opened a new pool just west of that city last week and they have started calling it the Corn field.

* * *

R. S. Hugill, for the past eight years with the Frick-Reid Supply Co., Tulsa, has joined the Indian Territory Illuminating Oil Co. as superintendent of stores. He is located in Oklahoma City. He succeeds A. D. Larson, resigned.

* * *

H. R. Owens has assumed his duties as an assistant to the management of the Indian Territory Illuminating Oil Co. He resigned as secretary of the Independence, Mo., chamber of commerce. He was one time disbursing auditor of the Empire Companies, Bartlesville, Okla.

* * *

Married: In Oklahoma City, Frank Murray, of the production department, Indian Territory Illuminating Oil Co. and Miss Christine Diffendaffer.

* * *

Married: At Wewoka, Okla., John A. Walthour, civil engineer for the Indian Territory Illuminating Oil Co., Seminole district, and Miss Ann Shoemaker.

* * *

J. J. Lawry, Seminole district superintendent of the Indian Territory Illuminating Oil Co., is soon to resume his duties after recovering from a broken leg. He sustained the injury when he fell from a bridge in the Konawa district.

* * *

Pure Oil News for October has a little story about one of its pioneer field men, Grant Stanley, the oldest employe in point of service in the company's Cushing district. In the early days he hauled freight from Ponca Trading Post to Hominy Trading Post, the latter in the Osage country. Both towns long ago dropped

Snapped at the recent Petroleum Exposition. Left to right: J. J. Conry, general superintendent of production, Carter Oil Co., Tulsa; E. J. Sadler, vice-president of the Standard Oil Co. of New Jersey and John R. Suman, vice-president of the Humble Oil & Refining Co., Houston

the "trading post" part of their names. Mr. Stanley has been with the Pure 19 years. He now is a night warehouseman.

* * *

The following pun, we think, is pretty poor but it is printed at the insistence of Ellick Botts, popular expumper of the Gray Horse district. Says Mr. Botts:

"California operators, in their discussions of the new gas law, are merely beating around the Reed D. Bush."

(Blueprint to above joke: Mr. Bush is state oil and gas supervisor in California.)

* * *

V. R. Crouch, of the Pure Oil Co. land department, Tulsa, was recently transferred to Wichita, Kans.

* * *

Walker W. Milam, of the Indian Territory Illuminating Oil Co., Oklahoma City offices, has resigned. Mr. Milam will engage in the lease business with some as yet unnamed Oklahoma City associates.

* * *

Interesting information from Standard of California publication: Taft, Calif., originally was named Moron.

* * *

O. D. Gurley, has been made general superintendent of all Globe Oil & Refining Co. plants. Prior to the promotion he was superintendent of the Cushing refinery. He has moved to Blackwell, general offices of the company.

* * *

Fred E. Tucker, Independent oil operator of Ardmore and secretary of the Independent Petroleum Association of America, recently conferred with Dr. Ray Lyman Wilbur, secretary of the interior, on limitation of imports of crude oil. The association was formed to campaign for a tariff on oil. The conference was in Washington.

* * *

Born: To Mr. and Mrs. Freeman W. Burford, in Shreveport, a girl. Mr. Burford is president of the Burford Oil Co., operating a refinery at Pecos, Texas.

* * *

Roger W. Babson, the man who juggles statistics deftly, in a statement made in Tulsa recently said that the oil industry would be classed as a public utility in "much less than 50 years." He believes the state will assume charge of distribution, granting monopolistic franchises in definite districts, regulating the price to the consumer.

* * *

Senator W. B. Pine, the oil producer, of Okmulgee, has applied for patent for a new method of making brick from clay and shales. He employed technical men to work out his ideas and plans to build a small demonstration plant in Oklahoma. The senator believes that brick made by his process will be ideal paving material.

* * *

On of the longest strings of 8-inch casing, seamless, was that set in the wildcat well of the Red Bank Oil Co., in the SW NW of 23-9-24E, Le Flore county, Okla. The string is 4660 feet long. The well, which is in the southeastern part of the state, opened a new gas field, getting five to six million feet at 5005 feet. Location was made on geology worked out by F. Julius Fohs, who is vice-president of the Red Bank.

* * *

Died: At Lawrence, Kans., Mrs. Ritchey, wife of Wilbur R. Ritchey, of the producing firm, Ritchey & Moore, Wichita. Death was due to an automobile accident.

* * *

The oil industry has total investment in Oklahoma in excess of two and one-half billion dollars, Baird H. Markham said in a report prepared for the state chamber of commerce. Mr. Markham is comptroller and assistant to the president of the Continental Oil Co. He said that annual payrolls and expenses of various phases of oil industry operations in the state are near five hundred million dollars.

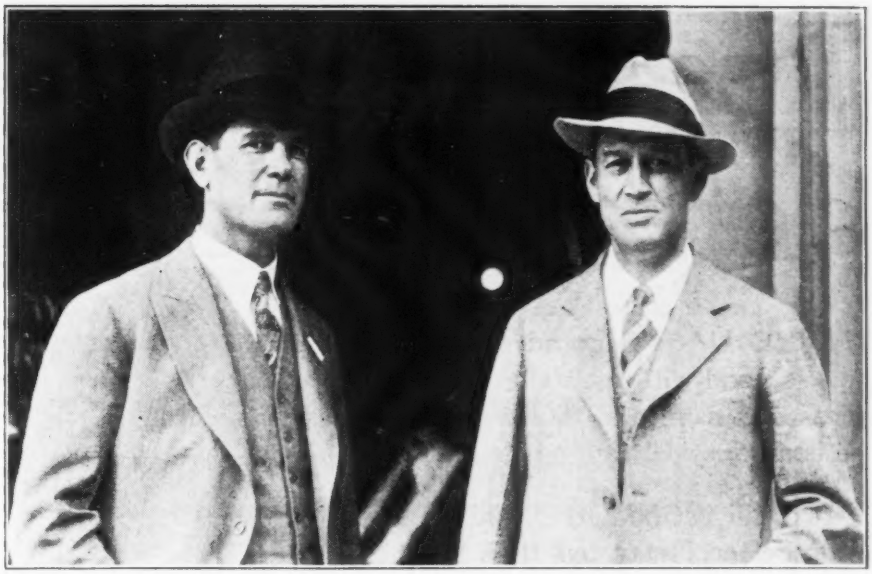
* * *

J. R. Stockton, since the death of George C. Pohler, has been acting chief purchasing agent of the Mid-Continent Petroleum Corp. Mr. Stockton was one time purchasing agent of the Producers & Refiners Corp. and was one of the organizers of the movement that finally lead to the standardization work of the A. P. I.

* * *

F. J. Keleher, formerly treasurer of the Midwest Exploration Company of Amarillo, Texas, has recently joined the forces of the Dixie Oil Co. in the capacity of general auditor. His appointment to this position is another indication that Al W. Peake, president of the Dixie, knows a good man when he sees one and has no hesitancy in reaching out to get him.

Mr. Keleher entered the service of the Midwest Refining Co. at Casper, Wyoming, in 1916. Five years later he was transferred to the accounting department of the general offices in Denver. When the Midwest Exploration Co. was organized in 1925 "Kelly" went to Texas as its treasurer and held the purse strings for four years. In private life he is just as willing to look at a doughnut as anyone else, but when it comes to business he can see more holes than most people can.



One of these gentlemen claims to be related to the other and the contention is vigorously disputed by the party of the second part. Both came from the Shenandoah Valley of Virginia. On the left is Oliver B. Hopkins, chief geologist of the Imperial Oil, Ltd. and its subsidiary, International Petroleum Co., Toronto. T. K. Harnsberger, of Tulsa, is on the right

F. J. Keleher

The Supreme Court defines Good-Will - - - -

THE U. S. Supreme Court has defined good-will as "the disposition of a pleased customer to return to the place where he has been well treated."

It could not be better said in so few words —or better illustrated than by the return of our customers, year after year, with increasing purchases of Greenspon's Pipe.

Mile by mile and month by month the total of our pipe used in the petroleum industry grows. Pleased customers return, to avail themselves of the protection given by our guarantee and the satisfaction given by our product.

Whatever your pipe requirements, we'll meet them accurately and speedily. Write, wire, or 'phone for quotations and delivery dates. Any of our offices will welcome your inquiry.

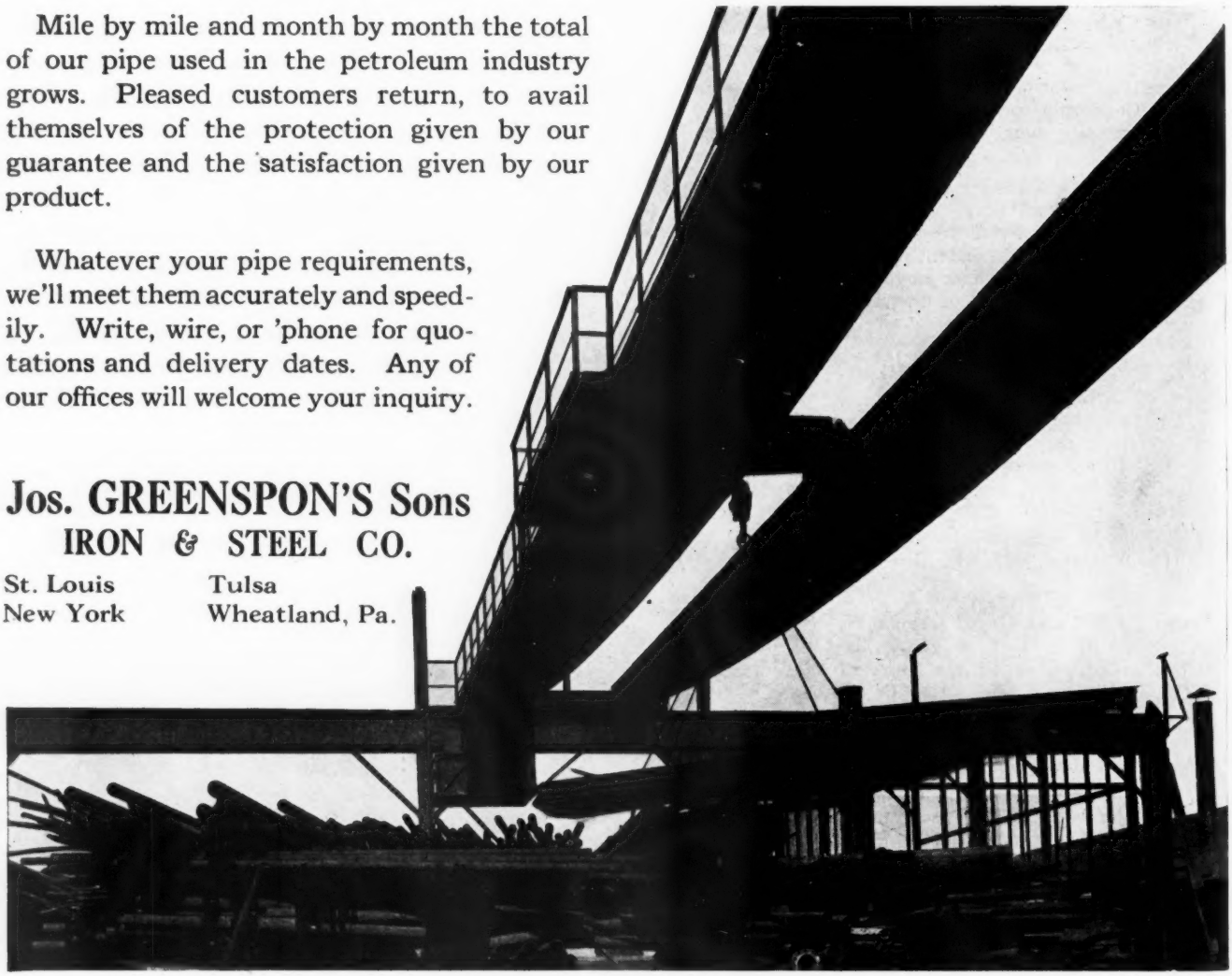
Jos. GREENSPON'S Sons
IRON & STEEL CO.

St. Louis Tulsa
New York Wheatland, Pa.

ODEE PIPE FOR GAS LINES

ODEE PIPE for GAS-LINES

comes in double lengths—saves half your field welding. A pioneer product of Greenspon's.



GREENSPON'S
PIPE FOR ALL PURPOSES

A. P. I. Field Chapters Discuss Exhibits

TULSA, Oct. 17.—The October meetings of both the Drumright and Tonkawa chapters of the American Petroleum Institute Division of Development and Production Engineering were devoted to discussions of the International Petroleum Exposition held in Tulsa, October 5-12. At both meetings the feature was the showing of a moving picture of a tubing leak finder in operation. This tool, and the time saving purpose for which it was invented were commented on by the field men in attendance.

During the meetings field men present who had attended the exposition told of what they had seen and learned there that had impressed them the most. New equipment, new methods, new ideas, which the engineering and manufacturing trend of the industry has advanced rapidly in recent years were discussed in generalized fashion, most of the field men having seen so much in such a comparatively short time that they had not as yet digested it all.

Commented on at both meetings was the Field Men's Idea Contest staged by NATIONAL PETROLEUM NEWS. It was spoken of by one of the superintendents present as the outstanding thing of interest at the exposition. All of the equipment mentioned at the A.P.I. meetings, its intended and possible uses, had been entered in NATIONAL PETROLEUM NEWS Idea Contest, so that in fairness to all contestants, a fuller discussion of the equipment mentioned at the meetings will not be given until the winners of the contest have been announced in the October 30 issue of NATIONAL PETROLEUM NEWS.

Both meetings were considerably more infomal than the usual monthly discussions. Salesmen representing various manufacturers of oil field equipment were allowed to talk briefly about their products, a distinct departure from the usual procedure of the field chapter meetings.

Operators in the Muskegon oil field of Michigan have shown a sufficient appreciation of the value of cementing practice that the Halliburton Oil Well Cementing Co. has found it necessary to send a second outfit into the territory. A high head of corrosive water overlies the upper pay in the Dundee horizon at about 1900 feet, which operators have found desirable to shut off. No cement was used in wells originally drilled in the field.

A. C. Veatch, long identified with geological research for the Sinclair Consolidated Oil Corp., at New York City, is now on a trip to Africa.

BETHLEHEM
WAX PLANT EQUIPMENT

Filter Presses — *Wax Moulding Presses*
Wax Distillate Chilling Machines — *Scale Wax Cooling Drums*
Wax Testing Presses — *Paraffine Wax Sweater Plants*
Complete Wax Plants designed and built
Pumps, Stills, Towers, Condensers and other Oil Refinery Equipment
Oil Burning Systems — *Complete Power Plant Equipment*

BETHLEHEM STEEL COMPANY, *General Offices, Bethlehem, Pa.*

District Offices

New York Boston Philadelphia Baltimore Washington Atlanta Pittsburgh Buffalo Cleveland Detroit Cincinnati Chicago St. Louis San Francisco Los Angeles Seattle Portland

"That's a towel!"

THINK it's costing you too much to wash the grime off your crew? Well, it's a tough job for any towel to clean up the mess this business leaves a man in.

But here's a paper towel that does it—and saves you money. It's made for jobs like this. Used in gas stations and garages, in refineries and at the wells. Proved better. Most economical.

A. P. W. Fibertex Victor Towel. Real fibre tissues. Tough enough for the hardest hands. Doesn't tear. Yet soft enough for the face. Big. Absorbent. One's plenty any time. Right there money is saved in the long run.

Besides, Fibertex costs less to buy than any other towel. That's money in your pocket from the start.

The coupon below will bring valuable information. Mail it now.

Fibertex
Victor
TOWELS

A. P. W. PAPER COMPANY
Albany, New York

Please send estimate of price and number of boxes of Fibertex towels required for plant of_____men for_____weeks.

Name_____

Business_____

Address_____

NPN-10-29

Oklahoma City Pool Hits New Peak; New Pool West of Wichita

By John Power
N. P. N. STAFF WRITER

TULSA, October 19

TWO huge new wells in the Oklahoma City pool, a Wilcox well in the hitherto exclusively Hunton lime and Simpson area in 15-7N-4E, between the Pearson Switch and St. Louis pools, and the discovery of production in a new Simpson pool immediately west of Wichita, Kansas served as further evidence of the need for the production restrictions now being worked out.

With wells of initial productions of more than 700 and 600 barrels per hour respectively the Oklahoma City pool continued to dominate the situation, although neither of the wells was so located as to extend the area already regarded as proven. They were drilled in on different days, and neither well had a chance to have a full 24 hours of production included in the day's gage for the field as a whole. The pool nevertheless set a new peak on Oct. 18 of 89,653 barrels.

Were is not for the operating agreement which caused the new wells to be shut in after 24 hours of production, thus keeping their full gage from the field's total, it is more than likely that the pool would have at least reached the long prophesied 100,000-barrel per day mark.

The first of the new big wells to be completed was the Mid-Kansas Oil & Gas Co. No. 3 Fortson, in the NW NE of 24-11N-3W. It blew in shortly after noon October 17, making 732 barrels of oil the first hour from a total depth in the lime of 6554 feet. The well continued to produce in amount close to this imposing initial, making 13,000 barrels the first 18 hours it was in. In accordance with the agreement covering all wells started prior to Jan. 1, 1930, it has been shut in after its first 24 hours of life. During that time it made a total of 17,166 barrels.

Following closely on the heels of this producer came the Indian Territory Illuminating Oil Co. et al No. 2 Button, SW NW SW of 19-11N-2W, which had 640 barrels per hour as its initial from a total depth in the big lime of 6530. It clicked along at a merry rate the first 14½ hours of its existence, making 9258 barrels in that length of time. Had it been completed a day earlier, or had the Mid-Kansas well been a day later the Oklahoma City pool would have had its 100,000 barrel mark, and then some.

While mentioning the ifs and ors, without the present agreement, which is keeping more than half a dozen wells shut in, the pool would in all probability be making around 125,000 barrels, with more oil coming almost every day. It doesn't take very many wells of the size of some of those completed in the pool to send field totals skyrocketing.

But although the Oklahoma City pool more or less dominates the horizon just at present, the rest of the Mid-Continent is by no means dead. There have been numerous disappointments in the search for really commercial Wilcox sand production in the numerous Hunton lime and Simpson puddles discovered between the St. Louis and Pearson Switch pools of eastern Pottawatomie county. But the Magnolia Petroleum Co. No. 2 Tartar, NW SW of 15-7N-4E, may have turned the trick. Starting off at the rate of 75 barrels per hour while drilling the top of the Wilcox at 4285, the well increased its flow to 100 barrels an hour when three feet of the formation had been drilled.

The new well is in a nine well Hunton lime and Simpson pool midway between the northeastern part of the Pearson Switch pool and the northwest Hunton lime extension to the St. Louis pool. There are some four or five wells drilling at the present time, but it is probable that the performance of the Magnolia's test, as well as the outcome of some of the drilling wells, will be watched before any really important drilling campaign gets under way. There have been flashy wells in this area before which have failed to justify the drilling of offsets.

OUTSTANDING among the week's oil developments in Kansas was the partial completion of what appears as a good well on a core drilled structure just west of the city of Wichita. Plains Petroleum Co. No. 1 Curry, SE SW SW of 2-27S-1W has a hole full of oil, and is slopping over at the rate of from five to 10 barrels hourly from the top of the Simpson dolomite at 3389.

The formation, the same as produced in the original Sedgwick county pool, was but scratched, so that is quite likely that the test may make a really good well when drilled in. The Wright pool turned in some wells with initials of as high as 1800 barrels daily.

Practically all of the acreage surrounding the discovery is owned by the Shell Petroleum Corp. T. C. (Tom) Johnson, Independent Kansas operator, has a 30-acre piece offsetting the well on the west. His tract is the west 30 of the 40-acre tract on which the Plains 10-acre lease is located.

A QUARTER east of the well the Sinclair Oil & Gas Co. has an L shaped 80-acre lease, while the Gypsy Oil Co. has 160 acres covering the center of the east half of the section. Continental Oil Co., has the northwest quarter of the section, with the Shell Petroleum Corp. owning the rest of the section as well as several thousand acres west and south of the discovery.

Although some doubt was expressed at first as to whether the owners of the new well would fall in line with the recently adopted proration agreement covering Kansas, it has been reliably reported that the well will be shut in for 30 days. Three locations have been announced as tentative, the offsets on the west, south and east being staked, but it is not known whether or not they will be drilled while the well is shut in.

A well drilling about two miles north of the Plains discovery is being closely watched, as it is reported to be running high enough on the chat found on top of the Mississippi lime to have a chance for production in the deeper Simpson, or dolomitic pay.

A small pool has been under development for several months six miles north of Vinita, Okla. in what is probably the Burgess sand, found around 300 feet below the surface. This is territory hitherto considered "impossible" as the principal oil bearing formations found farther west are quite near the surface. In fact, the Bartlesville sand outcrops in the vicinity of Vinita, which is 70 miles northeast of Tulsa.

All development has been carried on by O. M. Confer, of Miami, Okla. In Sec. 21-26N-20E he has drilled nine producing wells and four dry holes. The production is so far con-

fined to the SW quarter of that section and to the NW SE, Sec. 21.

There is no pipe line and no oil has been marketed except for 100 barrels produced from one well and sold to the county. One well made 26 barrels in four hours, but except for these two no production tests have been made. The oil is of excellent quality, 37 gravity at 80 degrees Fahr.

Wells are put down for not to exceed $500 each. The only casing used is 120 feet of 6¼-inch, an obsolete size bought second-hand in the Nowata district.

* * *

Notes on the Week

What may prove to be the official opener of the Voshell pool, of McPherson county, Kansas is the Slick, Pryor and Lockhart No. 1 Grattan, NE NW NW of 34-20S-3W, which filled up 1500 feet with oil in 12 hours. There is about one million cubic feet of gas per day with the oil, which is coming from the chat topped at 3093-98.

The original Voshell well, drilled by Ted Washabaugh, had to be abandoned after numerous fishing jobs, before its full possibilities could be determined. The No. 1 Grattan is running some 48 feet lower structurally than the Voshell.

* * *

Added life has been given the Wilcox explorations west of the Allen pool, southern Seminole county. Several wells with initial productions of around 50 barrels hourly after being shot have been completed. The production this time is coming from the second, or true Wilcox sand.

H. E. Sadler, Pioneer Producer Dies

NEW YORK, Oct. 19.—The death of Holmes Elias Sadler on Oct. 10, marks the passing of another pioneer from the oil industry. Mr. Sadler is reputed to be the one to obtain first profitable commercial oil production in the Mid-Continent field, which was about 1890. He is the father of E. J. Sadler, a director of the Standard Oil Co. of New Jersey.

Mr. Sadler was a graduate of Yale and the Albany Law School. He engaged in research work after graduation at the Sheffield Scientific School, after which he moved to Kansas where he was influential in framing the state's tax laws back in 1880. Ten years later he became associated with the late William Geiser, as an attorney, but soon afterwards joined him in producing oil in Chautauqua county, Kan. He retired from active producing in 1913 upon the death of his partner, and moved to Memphis in 1917 in failing health.

He leaves a wife, two daughters and a son.

Tycos Back Pressure Regulator

(Pilot Operated)

THE Tycos Back Pressure Regulator successfully meets the demand for an instrument capable of giving close and consistent back pressure regulation, which the present highly developed and scientific practices of natural gasoline manufacturers demand.

It will maintain constant back pressures on gasoline plant absorbers, accumulator tanks, fractionators or stabilizers, surge tanks, stock vent tanks, re-run stills, residue gas lines, etc. Also on pressure distillate receivers, or gas separators of refinery cracking units.

Close regulation is assured by the high sensitivity of the regulator response and the throttling action of the control valve. With tendency toward the slightest pressure change in the process under control, the valve in the gas discharge line immediately throttles to such a position as is necessary to release the required amount of gas to give a consistently smooth and constant back pressure, as is evidenced in the even line on the recording pressure gauge chart.

Additional information on this installation furnished on request.

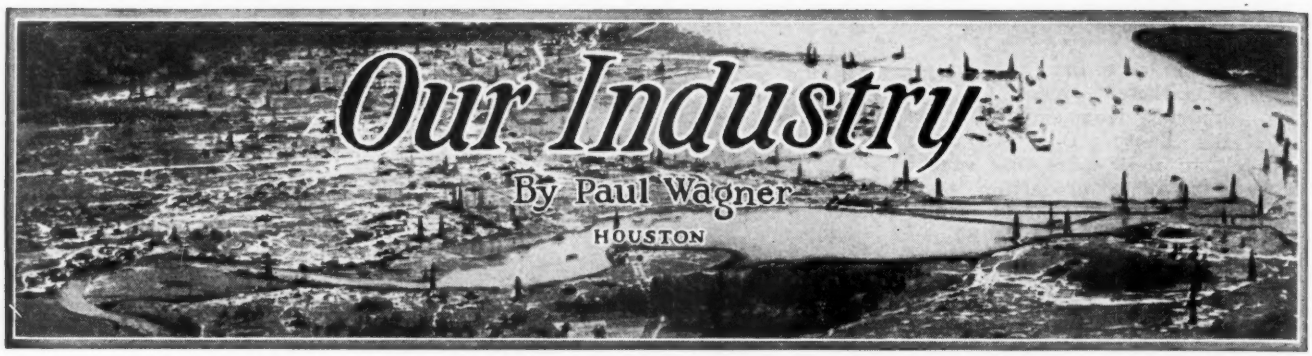
Taylor Instrument Companies
ROCHESTER, N. Y., U. S. A.
CANADIAN PLANT, TYCOS BUILDING, TORONTO
MANUFACTURING DISTRIBUTORS IN GREAT BRITAIN
SHORT & MASON, LTD., LONDON

Tycos Temperature Instruments
INDICATING-RECORDING-CONTROLLING

Gray Treating Towers

THE M. W. KELLOGG CO.
225 Broadway • New York

Houston, Texas.....1514 Petroleum Bldg.
Tulsa, Okla.....Philtower Bldg.
Los Angeles, Cal.....1031 So. Broadway



IN ITS future handling of producing and geological provinces in Texas, the American Institute of Mining & Metallurgical Engineers proposes to divide the territory into six general districts instead of the four areas of the past, according to Cresap P. Watson of Fort Worth, vice chairman of the A.I.M.E., and president of the Federal Royalty Co.

A separate district will be carved out of the south and southwest Texas region, which was previously dealt with under the Gulf Coastal division. The new territory will be bounded on the east by the Colorado river and will extend west as far as Del Rio. Panhandle territory, which was previously dealt with in connection with the Permian salt basin of West Texas and southeastern New Mexico, hereafter will be classified as a separate district. The two other provinces, additional to the four mentioned, are the East Texas and the North Texas districts.

Papers presented at the annual meetings of the A.I.M.E., in New York, in February, have become quite valuable additions to the oil literature of the country, particularly since they constitute chronological records of economic exploitations. In this connection, oil executives are now concerned with maximum extractions of crude at minimum development costs, consequently the petroleum engineer must be equipped to advise his superiors not only on matters of technical development but also with relation to economics.

* * *

S. W. Oberg, chief civil engineer of Humble Oil & Refining Co., Houston, reached the head of his department in the reorganization of the Humble's engineering activities more than a year ago. At that time, the company changed its policy of operating engineering work through a central staff in charge of a general department chief overseeing all types of work.

Mr. Oberg, who had previously headed civil engineering as a part of the central scheme, took full responsibility for his own department. Hu. M. Harris joined the Humble as chief mechanical engineer, operating independently with his department, and W. W. Scott, formerly of the Pure Oil Co., took the reins as chief production engineer.

* * *

J. B. Taylor has been appointed Minden district sales manager of Louisiana Oil Refining Corp., Shreveport. He succeeded H. L. Machen, who went to Pine Bluff.

* * *

Delbert Leggett, formerly in the land department offices of the Dixie Oil Co., Inc., subsidiary of Standard Oil Co. of Indiana, at Wichita Falls, has been transferred to San Angelo for work in the West Texas Permian salt basin region.

* * *

Removal of headquarters of the Westhyde Investment Co., from Ponca City to Fort Worth, resulted in the transfer of J. M. Zachary, secretary, to the North Texas metropolis. C. E. Hyde, vice president, already was located in Fort Worth, with offices in the W. T. Waggoner building. Chester H. Westfall, president, will continue to live at Ponca City.

J. R. Irwin, formerly chief geologist of the Producers & Refiners Corp., in Rocky Mountain territory, and later a Denver consultant, has gone to Canada as chief geologist of the Nordon Corp., Ltd. Mr. Irwin is president of the Rocky Mountain section of the American Association of Petroleum Geologists.

* * *

E. W. Geser, vice president of the Emsco Companies, Los Angeles, and L. R. McCollum, in charge of their Mid-Continent interests at Dallas, sailed for London early in October to establish a European sales organization. An Emsco plant has been recently established near London. E. M. Smith of Los Angeles, head of the companies, was already in London.

* * *

J. N. Martin, a familiar figure in equipment circles of the southwest, who represents the Allis-Chalmers Co., has moved his headquarters from Dallas to the Post-Dispatch building, Houston. When not in his office, and his friends describe that situation as the usual thing, he may be found in the various fields of the oil country pushing his wares.

S. W. Oberg

J. N. Martin

E. W. Marland, head of the Southland Royalty Co., and E. W. Marland, Inc., has returned to his home in Ponca City, where he continues to recover from a recent kidney operation in a Memphis hospital. Friends describe his health as greatly improved.

* * *

L. S. Winter of the land department of the Atlantic Oil Producing Co., Dallas, has been transferred from the Corsicana district to the San Angelo territory.

* * *

Oklahoma City offices of the Southland Royalty Co., an E. W. Marland enterprise, have been opened with E. H. Van Patten in charge of land work and Fritz Aurin overseeing geology.

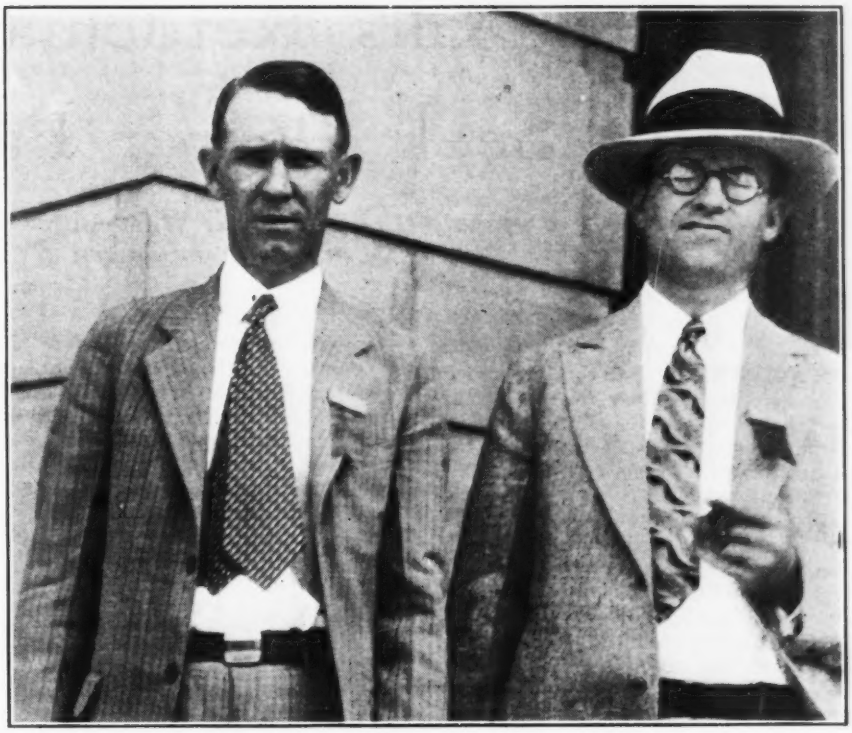
* * *

E. J. Sadler, production vice president of the Standard Oil Co. of New Jersey, returned to New York about the middle of October, after an extended visit to various oil areas and a stop at Tulsa for the Exposition. Mr. Sadler made a considerable part of his trip by air.

* * *

Wherever one attends an operating or engineering meeting in the petroleum industry of the southwest there he will find F. C. Metzger, chief engineer in the producing department of the Sun Oil Co., Dallas. Mr. Metzger, who has been affiliated with the Sun's activities in Texas and elsewhere for many years, takes an active part in American Petroleum Institute work.

F. C. Metzger



W. H. Rinkle, sales manager, and William H. Saunders of the International Lubricants Corp., New Orleans

R. T. (Dick) Miller, who scouted West Texas from San Angelo for Sinclair Oil & Gas Co. in the early days of Permian salt basin development, now works out of Shawnee, Okla., for the same organization. He was a recent visitor in Wichita Falls, accompanied by Mrs. Miller.

* * *

John R. Reeves, formerly in charge of the geological department of the Empire Companies at Bartlesville, is now in Muskegon, in charge of his company's Michigan operations.

* * *

H. T. Morley is now at Amarillo, Texas, as district geologist of the Midwest Refining Co. He was formerly stationed at Abilene.

* * *

E. L. De Golyer, chairman of the board of directors of the Amerada Corp., is expected to return to his New York headquarters about the middle of October after a business trip to Europe.

* * *

E. P. Gudger, head of the traffic department of the Gulf Production Co., at Fort Worth, has been affiliated with that organization's North Texas activities since Ranger development days. The Fort Worth division, through which he operates, includes within its bounds the central and West Texas territories, the Panhandle region and the Greater Wichita Falls district. Mr. Gudger's principal recreation is golf.

Martin A. Row, who has been on leave of absence from the scouting department of the Sun Oil Co., in the San Antonio district, while finishing his schooling at Leland Stanford University, is now back with the Sun at Dallas producing headquarters for the southwest.

E. P. Gudger

Standard Kills Kettleman Hills Well To Seek Deeper Pay Sand

By Jack N. Westsmith
N. P. N. STAFF WRITER

LOS ANGELES, Oct. 18

CALIFORNIA operators continued in their search for new oil fields although there has been an alarming increase in refinable stocks. Major executives used this overflowing storage as a threat against some Independent producers who would rather have the proceeds from the oil now than to wait until some future date when overproduction is possibly a thing of the past.

With 223 active drilling wells in the Santa Fe Springs field there was every indication that the daily average output would not register a substantial decrease for weeks and possibly months.

According to an estimate based on the week ending October 16, 211 wells produced 263,517 barrels of oil daily from the deep zones. Standard Oil Co. continued to lead all other producers in the Clarke sands with 34,145 barrels from 17 wells or an average of 2008 barrels per well. Shell Oil Co. followed with 14,470 barrels from 6 wells to give an average of 2411 barrels per well.

Wilshire Oil Co. the doubtful producer in the Santa Fe Springs field as far as reliable information concerning its actual daily yield or depth on wells is estimated to have the following production from the deep sands in this field.

Zone	Total Prod.	No. Wells	Av. per well
Buckbee	850	3	283
O'Connell	20,400	11	1872
Clarke	5900	3	1966

Total production for Santa Fe Springs was boosted somewhat by ten completions with a combined daily output of 20,475 barrels. As a result of this flush oil the deep sands showed an increase of 5830 barrels for week ending October 16 as compared with the daily yield for the previous week.

Production by zones for week ending October 16 was as follows:

Zone	Total Prod.	No. Wells	Av. per well
Nordstrom	13,695	20	685
Buckbee	18,998	37	513
O'Connell ..	131,599	104	1265
Clarke	99,225	50	1984

Nordstrom and O'Connell producers suffered a natural decline for the week while Buckbee and Clarke wells showed a gain over the previous week's yield.

No new locations were made in the Santa Fe Springs field during the past week and only a few wells were spudded in. With 263 wells at various depths below the grass roots, as outlined in the accompanying table, it may be seen that there is not likely to be a dearth of fresh completions in this field for some time.

Recent fiascos by California operators in the Lawndale and Santa Barbara Mesa fields have caused more careful surveys of reported "great finds." In these two fields operators spudded-in and drilled several thousand feet before stopping to think that the failure of their neighbors to obtain commercial production might portend possibly a similar fate for their own wells. The majority of operators in the Potrero field have held up all activities to await the outcome of several wells that were thought to be in the pay sand but which after yielding only a few barrels of oil sanded up and are now either on the pump or compressor.

George F. Getty interest's Parker No. 1 which was completed in the townlot area southeast of the city of Inglewood for an initial production of 1400 barrels of 45 gravity oil from a depth of 3800 feet, sanded up and although later cleaned out is now reported to be making only 50 or 60 barrels of oil on the pump.

In hopes of opening up a deeper sand in the Potrero field Getty will drill a deep test carrying it down to below 4000 feet if necessary. The decision by Getty to drill deeper was largely due to the findings in the York-Lockhart 1 an offset to the Parker 1. York-Lockhart's well was placed on the compressor and is now reported to be making approximately 300 barrels of oil and 200 barrels of water per day.

Whatever future drilling discloses at Potrero it is hardly likely that production in California will be greatly increased as a result of the addition of light gravity commercial producers from this field. Dry holes on three sides of the present Potrero field limits it to a small area unless producing horizons are found at lower levels.

Progress Chart of Santa Fe Springs Drillers

Co's.	Rigs, Rign. up & idle rigs	New Spud	Surface to Meyer	Meyer to O'C.	Drlg. to O'C.	Prep. to comp. in O'C.	Drlg. to Clke.	Prep. to comp. in Clke.	Idle Drlg.	Total
Associated	1	0	2	3	0	0	1	2	0	9
General Pet.	5	0	8	23	11	0	9	4	2	62
Richfield	0	0	0	4	2	0	4	0	1	9
Shell	1	0	2	9	2	0	5	1	0	19
Standard	1	1	5	10	3	0	6	3	4	33
Texas	2	0	1	10	5	0	8	0	0	26
Union	0	0	7	5	1	1	5	0	0	19
Others	10	1	8	20	11	0	23	0	12	85
Totals	20	2	33	84	33	1	61	10	19	263

Not at all satisfied with the results obtained Standard Oil Co. of Calif. killed its well No. 11P-81 on the North Dome of Kettleman Hills with the intention of seeking a lower sand. This well is an offset to Milham Exploration Co.'s discovery well on the north dome and is also an offset to Continental Oil Co.'s No. 12-8.

Standard's well will be deepened from below the 6673 foot level from which it has been producing approximately 1000 barrels of oil and 20 million cubic feet of gas per day for the past six weeks. When Continental succeeded in completing its 12-8 for 7000 barrels of oil and 130 million cubic feet of wet gas having a gasoline content of three gallons per thousand cubic feet it was expected that Standard would endeavor to increase its output of Kettleman Hills' high gravity oil. To gain greater output Standard expects to drill to at least 7200 feet before recompleting its well.

The 11P-81 is one of Standard's wells that was to be completed under the Kettleman Hills agreement signed by all operators, which agreement was destined to cut down production from this field for two years.

It was hoped that by the completion of three wells on the north dome it would be possible to shut in Milham's discovery well and thereby reduce to zero the daily output of the

Kettleman Hills. From first indications immediately after Continental completed its well it appeared that one or two completions might reduce the pressure because at this time the pressure dropped to nearly 1000 pounds and the production to about 2600 barrels per day. From latest reports however, the pressure has returned to about 1400 pounds and the production to 3400 barrels per day, precluding the possibility of completely shutting in production from this field at least until Standard's two wells are completed.

Ohio Oil Co. killed its hot-water wildcat on the south dome of Kettleman Hills and is now cleaning it out. This well which blew in last week making between 20,000 and 30,000 barrels of water per day from a depth of 7000 feet was reported to be coring oil sand before it blew in and it is the opinion that the oil sand may have been passed or mudded off.

Just what action the company will take to correct this wetness has not been divulged but it is expected that the drill will be pushed in search of deeper oil sands. The exact point from which the water is coming is uncertain but it is thought to be coming from below the shoe.

Barnsdall-Rio Grande joint interests completed their tideland permit well No. 88-1 for an initial production in excess of 5000 barrels of oil per day from a depth of 3477 feet.

Potentials Fixed by Decline Curves in Okla. Proration

TULSA, October 19

WITH an entire absence of complaint on the part of operators Oklahoma's flush and semi-flush fields went under proration Oct. 16. With such an auspicious start it is generally conceded that the proration plan will succeed.

The corporation commission signed the proration order as announced in the Oct. 16 issue of NATIONAL PETROLEUM NEWS, embodying terms agreed upon a week earlier by the operators. The only novel thing about the order was the appearance of Commissioner Childers' name on it. It was the first time he has signed such an order in the long series.

Umpire Ray M. Collins, who is in general charge of enforcement of the order, immediately went to work organizing for the task. Details of how each field is to be handled have previously been set forth in these columns. It is felt that the system is as simple as can be devised. In the older fields potentials upon which proration is based are arrived at by decline curve method, the daily average production for each lease in September constituting the potential for the period Oct. 16-31.

Weekly 24-hour gauges are to be taken each Wednesday on the Asher, East Little River, Sasawka pools and the Wilcox sand wells in the Allen pool. A novel feature is introduced on the taking of these gauges. To get away from any complaint on accuracy of the 24-hour gauge figures, the commission put this expression into the order:

". . . to insure accuracy and equality among operators in each of said pools in regard to their respective potentials, the umpire, immediately upon the granting of this order and in respect of each producing lease shall appoint as a witness of the gauge of production from such lease a representative of an operator owning an adjoining lease. It shall be the positive duty of the person appointed to be present on the lease to be gauged throughout the entire 24-hour period such gauge is in progress and to witness and verify the correctness of the same."

The effect of proration is difficult to determine this early. An estimate by one of the major companies here shows a total of 708,000 barrels daily for the state for the past seven days. This is an increase of 58,000 barrels over the previous week's daily average. Oklahoma City, opened to production on Oct. 12, and therefore counted in this total—it had been completely shut in—average 74,500 barrels. The rest of the state, therefore, lost 16,500 barrels on daily averages. Some of this was due to natural decline, but a considerable part came through proration.

No close estimate can be made from week to week on the more settled pools. The method of prorating varies. Some companies are cutting back from their potential each day while others will rely on Sunday shutdowns to achieve the reduction. If a 24-hour shutting in of wells on Sunday is not sufficient, part of Saturday will be used to keep down to the allowed quota.

Not all of the figures on the leases affected were in the hands of Umpire Collins on Saturday and it was expected that two or three more days would be required to have final potentials and deductions for the first period figured out.

Assisting Umpire Collins are six men in the field. Otto Bradford continues in the Oklahoma City district, which position he held before that field came in under the general proration. J. E. Flynn is stationed in East Earlsboro and Earlsboro pools; Bob Bradley in Little River and East Little River; C. A. Carney is the umpire's representative in the Allen and Sasawka pools; J. E. Terry in St. Louis and Asher and S. W. Collins in the Marshall pool, Logan county.

Never, since proration was started in the Seminole district three years ago, has a plan been drawn up that was so generally agreed upon and never before has there been the absence of objections that mark the present undertaking. Not a hitch of any consequence is anticipated and conversations with the affected operators fail to bring out a dissent of any character vital to the general plan.

There were some in the beginning who believed that leases making considerable water, where production was small, should be exempt from proration, but no argument was advanced on this score and all properties in the areas named in the order are under the ban.

A small flurry arose in the Wichita, Kans., district during the week and reports were that certain of the lesser operators in the Valley Center pool would open to full production. The trouble was quickly ironed out, according to last reports, and proration will continue the full 30 days.

Completions in North Louisiana and Arkansas, Week Ended October 17, 1929

Company	Well	Location	Depth	Yield
Lousiana—Bossier Parish—Sarepta				
Nemours Corp.	Kilgore No. 1	31-23-11	3062	dry, aband.
J. F. Palmer	McCann No. 4	31-16-11	1500	dry, aband.
Caddo Parish—Dixie				
Texas Company	Hunter No. 2	9-19-14	2440	70 bbls.
Caddo Parish—Pine Island				
Standard Oil Co.	Allen No. 12	23-22-15	1066	10 bbls.
Simplex Oil Co.	Youree-Randolph No. 7	13-20-15	2326	salt water, abd.
Ouachita Parish—Monroe				
Austin & Jordan	Chavin No. 1	62-18-3E	2216	2M ft. gas
Sabine Parish—Zwolle				
A. H. Tarver et al.	Long Bell No. 2	18-8-13	1921	dry, aband.
Union Parish—Monroe				
Bahan & Bahan	Parks No. 1	2-20-3E	2146	5½M ft. gas
Bahan & Bahan	Peake No. 3	17-20-4E	2180	10M ft. gas
Webster Parish—Cotton Valley				
Palmer Corp.	Sallie Coyle No. 1	28-21-10	4662	30M ft. gas
West Carroll Parish				
H. L. Hunt, Inc.	Chickasaw Imp. Co. No. 1	24-23-11E	3005	dry, aband.
East Texas—Panola County				
Magnolia Pet. Co.	Davenport No. 1	Dunlop HRS	2828	26M ft. gas
Arkansas—Ouachita County (Smackover)				
Phillips Pet. Co.	Clayton No. 2	34-15-15	2019	85 bbls.
J. D. Reynolds	Fee No. 1	27-15-15	2047	20 bbls.
Skelly Oil Co.	Langley No. 1	35-15-15	1998	60 bbls.
Union County (Smackover)				
Imperial O & G Co.	Murphy No. 6	9-16-15	2354	30 bbls.
Standard Oil Co.	Goodwin No. 6	36-17-16	2230	20 bbls.
Union County (Rainbow City)				
Rovenger Oil Co.	Perdue B-3	9-17-14	3235	20 bbls.

Completions in Oklahoma and Kansas, Week Ended October 19, 1929

OKLAHOMA

Carter County

Company	Well No.	Location	Depth	Init. Prod.
Ven-Mex	3	NE SE NW 30-1-3 W	2764-2827	185
Magnolia	2	NW SW NE 30-1-3 W	2786-2795	295

Coal County

Cosden Inc	1	NW NE NE 6-2-8 E	T.D. 3210	Dry
Whitney	1	SEc NE 10-2-8 E	T.D. 202	Dry

Cotton County

Shasta	4	SEc NE NW NE 2-2-10 W	2134-2162	50

Creek County

Empire	2	NEc SW NW 36-15-7 E	2535-2580	40
Magnolia	3	SW NW SE 17-17-7 E	2331-2375	120
Pine et al	2	NWc SW SE 17-17-7 E	2351-2395	80
Sinclair	24	CSL SW SE 33-17-7 E	2393-2442	10
Peters	5	SW SE NE 21-16-8 E	3180-3198	315
Operators	1	SW NW SW 10-19-9 E	T.D. 2827	Dry
Sherry et al	1	NWc SW 24-19-9 E	T.D. 2842	Dry
Magnolia	6	CWL NW SW 6-17-7 E	T.D. 2921	Dry
Kurrell	4	NE NW NE 14-17-11 E	T.D. 1235	Dry

Garvin County

Texas Pacific	1	SEc SW 18-1-2 W	T.D. 1860	Dry

Grady County

Okla. Public Serv.	5	NW NE SE 35-5-8 W	2375-2400	14M

Hughes County

Magnolia	1	SWc NW 22-7-8 E	T.D. 3407	Dry

Kiowa County

McWhirter	1	SWc NE 2-5-17 W	T.D. 1308	Dry
Adams	1	NWc SW 2-6-17 W	T.D. 1001	Dry

Lincoln County

Blackwell	1	NEc SW SW 27-17-4 E	T.D. 4449	Dry

Muskogee County

Decius-Garrett	1	SWc SE 17-13-17 E	T.D. 2242	Dry

Okfuskee County

Ashe et al	1	SW NE NW 6-10-12 E	T.D. 3935	Dry
French et al	1	NW NE SW 17-11-12 E	2412-2414	6M
Mid-Continent	3	SWc NE 31-11-11 E	3020-3027	250

Okmulgee County

Lambert et al	3	NE NW NW 7-13-15 E	1858-1871	10
Penrod-Thompson	9	SWc SE NW 15-13-14 E	2460-2464	OWD 10
Kirkland-Son	4	CEL NW NW 20-15-13 E	2140-2160	1M
Lockhart	1	NEc NW NW 24-15-12 E	T.D. 2734	Dry

Osage County

White Eagle	1	SW SE NE 23-26-7 E	T.D. 3095	Dry
Peters et al	1	SEc NW 28-21-11 E	1898-1906	12
Peters et al	7	NW SE SE 22-27-11 E	1698-1715	90

Pawnee County

Donahue	1	SW NE SW 22-23-4 E	3241-3275	100
Spears et al	1	NW NE SE 20-20-10 E	T.D. 2246	Dry
Houston	1	NEc 25-20-6 E	T.D. 3337	Dry

Pottawatomie County

Shaffer-Margay	1	NEc 11-6-3 E	T.D. 4632	Dry
Wilcox	8	SE NE SE 8-8-5 E	4080-4105	250
Indep. et al	1	NE NW NW 2-7-4 E	3748-3892	1550
Sinclair et al	2	NWc NE 2-7-4 E	3768-4252	30
Magnolia	1	NW NE SE 8-7-4 E	3763-3940	10
Magnolia et al	1	NEc 21-7-4 E	3630-3775	460
Slick-Amerada	2	NW NE SE 19-6-4 E	3600-3649	325
Sinclair	5	SE NE SE 5-7-7 E	4153-4177	1850
Mid-Continent	9	NWc SE 5-7-7 E	4204-4219	2150
Continental et al	4	SW NW SW 4-7-7 E	4154-4177	560
Carter	1	NW NE NW 24-7-6 E	4519-4526	270
Texas	7	NE SW NW 23-7-6 E	3142-3153	265
Independent	5	SE SW SE 2-7-6 E	3077-3090	1605
Sinclair-Gypsy	1	SW NW NE 18-9-7 E	3980-4096	180
Sinclair-Phillips	2	NE NW SW 17-9-7 E	3450-3457	290
Sinclair	4	NE SW NE 18-9-7 E	4015-4095	415
Magnolia	9	NW SE NE 18-9-6 E	4366-4409	315
Carter	1	SE SW SE 31-10-6 E	4043-4282	125
Superior et al	4	SE SW SW 36-10-5 E	4459-4475	240
Pure	3	SE NW NE 13-6-7 E	4090-4125	1075
Pure	4	NW SE NE 13-6-7 E	4109-4122	4000
I. T. I. O.	2	SW SE SE 7-6-8 E	4115-4117	715
Sinclair	7	NE SW SE 7-6-8 E	4174-4177	490
Empire	1	SEc 3-8-5 E	T.D. 4360	Dry
I. T. I. O.	1	NEc SW 13-6-7 E	T.D. 4570	Dry
I. T. I. O.	1	NE SE NW 13-6-7 E	T.D. 4070	Dry

Stephens County

Pace et al	4	NWc SW NW NE 3-2-8 W	T.D. 1751	Dry
Lone Eagle	14	SEc NW SE 34-1-8 W	T.D. 2224	Dry
Denver-Wichita Falls P. L.	6	SE NW SE 28-1-8 W	T.D. 2507	Dry
Denver-Wichita Falls P. L.	1	NEc SE 35-1-9 W	T.D. 2765	Dry
Magnolia	26	NWc NE SW 34-1-8 W	1857-1859	15
Sykes et al	1	SWc SE NW 16-1-8 W	2105-2119	37M

Tulsa County

Highland	5	CSL NE NE 16-16-14 E	1630-1645	9

Wagoner County

Cory-Henry	1	C SE SE 4-16-18 E	T.D. 1054	Dry
Knox-Shouse	2	CSL NE SE 12-16-15 E	T.D. 1027	Dry
Mitchell	1	NEc 11-17-17 E	T.D. 240	Dry
Ash Bros	1	SE NW SW 15-18-17 E	T.D. 935	Dry
Mechlin et al	1	SEc NW 30-18-15 E	T.D. 1459	Dry

KANSAS

Butler County

Johnson et al	2	SWc NE 8-27-6 E	2754-2764	40
Empire	5	NW SW NE 34-27-5 E	2694-2726	125
Empire	88	NE SE NE 19-26-5 E	2536-2617	100
Empire	4	SW NW NE 34-27-5 E	T.D. 3172	Dry
Lario	1	NWc 15-26-3 E	T.D. 3255	Dry

Elk County

Sherman et al	1	NWc NE 4-31-10 E	T.D. 2138	Dry

Greenwood County

Empire	1	NE SW NE 22-22-12 E	1701-1716	170
Sheedy et al	1	SE NW NW 5-24-13 E	1637-1650	125
Mid-Continent	5	SW SE SW 11-24-12 E	1712-1725	50

McPherson County

Derby	1	NEc SE 9-21-3 W	3322-3325	1050
The Texas	1	NWc NE 12-20-2 W	2975-2982	2160
McPherson	1	C SW 11-19-2 W	2907-2924	30M

Rice County

Slick et al	1	NEc SW 21-20-10 W	3275-3284	150

Riley County

Derby et al	1	NEc 32-7-5 E	T.D. 2230	Dry

Sedgwick County

Shell	1	NWc SW 27-26-2 E	T.D. 3375	Dry
Wentz	1	SEc SW 10-26-2 E	T.D. 3187	Dry
Wentz	3	SE NE NW 1-26-1 W	3370-3395	480
Shell	3	SEc NE SW 15-26-2 E	2892-2895	225
Shell	2	SEc SW NE SW 15-26-2 E	2889-2895	205
Jones et al	1	NW NW NW 15-26-2 E	2908-2910	250
Deal et al	1	SEc NE SW SW 15-26-2 E	2930-2932	475

Shawnee County

Omar	1	NE SE NW 2-11-14 E	T.D. 2377	Dry

Sumner County

McDonald et al	2	SEc SW NW 14-32-2 E	T.D. 2210	Dry
Shell	2	SW SE SW 17-32-2 E	3332-3359	75
Washoma et al	3	CEL NE SW 36-31-2 E	1957-1968	200

New Field Operations in Oklahoma, Kansas, North, North Central, East Central, Panhandle and West Texas, Week Ended October 19, 1929

OKLAHOMA

Carter County

Company	Well No. & Farm	Location
Ven-Mex	1-Spears	SW NW SE 29-1S-3W
Ven-Mex	1-Methaney	SE NW SE 23-1S-3W

Creek County

Sherry & Murta	1-Clinton	SWc NW 12-15-9 E	
Sherry et al	1-Self	C SW NW 22-17-10E	
Magnolia	6-Vance	SWc NW NE 7-18-7E	OWD
Operators	3-Grayson	NWc SE SE 17-19-9 E	
Operators	2-Grayson	SWc SE SE 17-19-9 E	

Kiowa County

Medlin	2-Prough	NEc SW 18-6N-16W

Muskogee County

Mills et al	2-Kelly	NEc SW SW SW 13-13-18 E

Okfuskee County

Robinson	1-Rice	NW NE NW 2-10-9 E

Oklahoma County

Coline	6-Olds	NE NW NW 24-11-3 W
Coline	7-Olds	SW NW NW 24-11-3 W

Okmulgee County

Sheridan	1-Bruner	NEc SW NW 24-15-11 E
McInturff et al	1-Hawkins	NWc SE SE 20-12-14 E

Osage County

I. T. I. O.	421	SWc NE NE NW 26-27-11 E
Okla. Power & Water	124	NE NE NW 9-20-10 E
Peters-P. & R.	5	SE SW SW 22-27-11 E
Jennings	2	SW NW SW 32-29-12 E
Osage	396	SW NW SW 29-28-11 E
Winona	7	NE SW SE 20-29-9 E

Pawnee County

Gray	1-Gwin	SE NE SE 29-20 M-8 E

Payne County

Shaffer et al	1-Miller	NEc 20-19-5 E

Pontotoc County

American	5-Robertson	NWc SE 19-5-5 E
Dixie	1-Haynes	NWc SW 32-5-5 E

Pottawatomie County

McMann-White Eagle	3-Roberts	NEc SW 9-8-5 E
Magnolia	1-Ogle	NW NE SW 22-7-4 E
Magnolia	2-Lynn	SE NE NE 21-7-4 E
Atlantic et al	1-Bewley	SE NW SE 9-7-4 E OWD
I. T. I. O.	3-Weldfelt	SW NE NW 2-7-4 E
Mid-Continent	6-Rogers	NE SW SW 5-9-5 E
Twin State	1-Ray	NW SW SW 3-8-4 E

(Continued on Page 47)

New Field Operations in Oklahoma, Kansas, North, North Central, East Central, Panhandle and West Texas, Week Ended October 19, 1929

(Continued from Page 46)

Seminole County

Company	Well No. & Farm	Location
Texas	6-Magruder	NE NW NW 19-9-6 E
Louisiana	9-Warfle	C SW NE 20-5-8 E
Texas	5-Magruder	SE NW NW 19-9-6 E
Pure	7-Bates	NE SE NE 13-6-7 E
Carter	1-Brannon	NW SW NW 18-6-8 E
Gypsy	1-Smith	SW NW NW 18-6-8 E
Pure	6-Bates	SE NE NE 13-6-7 E
Tidal et al	2-Harjo	SW NE NW 20-9-6 E

Stephens County

Denver-Wichita Falls	10-Nigh	NEc SE NW 34-1S-8 W
Franklin	1-Martin	NE NW SW 9-2S-6W
Twin State	1-Davidson	SEc 11-3S-8W

Waggoner County

Finefield	3-Barnett	CNL SW NE 34-18-17 E

KANSAS

Butler County

Mohawk	2-McLean	SE NE NW 8-27-6 E
Lario	1-Newcomb	SWc SE 7-27-4 E
Sullivan-Melrose	1-Florence	NEc SW 6-27-4 E
Lario	1-Miller	NE SE NE 36-26-3 E
Richman-Reigle	2-Detrick	NEc SW 8-27-6 E
Straub-Dutton et al.	1-Kibby	SEc SW 12-28-3 E

Clay County

Crystal	1-Feivier	SWc 19-8-2 E

Cowley County

Binkley-Crow	1-Power	C SE SW 4-32-5 E
Hull et al	7-Bartlow	SE NW NW 19-32-5 E
Roth-Faurot	1-Reidy	NEc SE 31-31-8 E

Edwards County

Dixie-Amerada	1-McCarthy	SWc 22-25-17 W

Elk County

Pure	5-Chaffin	NWc SE 14-31-10 E
Kemper-Fory	1-Goss	SWc NW NW NW 10-31-10 E
Home	1-Lister	C NW NW 13-31-9 E

Greenwood County

National	1-Barrier	NWc SW 13-25-9 E
Bisagno et al	3-Ralston	CSL SW NE 9-25-13 E
Derby	1-Walter	NE NW NW 21-22-13 E
Empire	2-Norton C	NW SE NE 22-22-12 E

Lyon County

Valliere	1-Buck	NWc 28-21-11 E
Valliere	1-Murphy	SEc SW 17-21-11 E
Gordon-Stats	1-Bradfield	SEc 1-21-11 E
Sheedy et al	1-Williams	SE SW SW 18-21-10 E

McPherson County

Sinclair	2-Voshell	SWc NW 10-21-3 W
Sinclair	1-Voshell	NWc 10-21-3 W
Empire	2-Voshell	SEc NE 9-21-3 W
Derby	2-Stuckey	NE SE SE 9-21-3 W
Skelly et al	1-Newfeldt	SEc NE 19-21-3 W

Morris County

Arrow	1-Kinkle	C NW NE 8-16-7 E

Norton County

Richards et al	1-Colby	C SW 17-4-21 W

Russell County

Mid-West Explor.	33-Speer	SE SW NW 32-13-15 W

Sedgwick County

Bu Vi Bar	6-Reed	SE NW SE 1-26-1 W
Shell	5-Fischer	NWc SW SE 15-26-2 E
Shell	4-Fischer	SWc NW SE 15-26-2 E
Shell	3-Brown	NEc SE SW 15-26-2 E

Sumner County

Washoma et al	1-Bussard C	NWc SE 36-31-2 E

TEXAS

NORTH CENTRAL & EAST CENTRAL

Brown County

				Survey
Border	5-Munselle	Blk-3		Arenbeck
Owens, Inc	5-Cannon	Blk-3		Arenbeck
Paramount	1-Robbins	Sec-10		HT&B
Herring et al	1-Layman	Sec-41		HT&B
Beaumont et al	7-Spencer	.....		Swindle
Green & Co	1-Hill	.....		Walker
Lloyd	28-Collier	Blk-139		Smith

Callahan County

Eubank & Son	7-Eubank	Blk-48	Comal Co. Sch. Ld.	
McCleary et al	1-Hickman	Sec-1		T&GN
Testerman	4-Alney	Sec-2272		TE&L
Gibson-Johnson	1-McDonald	Sec-100		BBB&C

Coleman County

White Eagle	29-Morris	Blk-722 Sec-26	Webber
Penurian et al	4-Crowder	Blk-483	Woods
Penurian	5-Crowder	Blk-483	Woods
Smith	7-Morris	Blk-483	Woods
Jordan-Smith	1-Pauley	Blk-295	Peoples
Gutzman-Aldrich	1-Hass	Sec-71	GH&H
Burnham et al	1-Strozier	Blk-271 Sec-22	Gabel

Comanche County

Wills	1-Underwood	Sec-27	D&DA

Erath County

Mingus	1-Alexander	Lot 19	Espinosa
Peters et al	1-Fulfer	.....	Moses Goff

Eastland County

Pollard-Forster	1B-Spencer	Blk-2 Sec-20	H&TC
Rio Bravo	1-Jones	Blk-4 Sec-43	H&TC

Falls County

Killam-Phillips	4-Jones	.....	Hampton

Grimes County

Deering et al	1-Freund	.....	O'Conner

Jack County

Harper et al	1-Ezell	.....	Hughson
Harper et al	7-Box	.....	Hughson
Keiser-Duffy	1A-Jones	.....	Mobin

NORTH TEXAS

Archer County

Company	Well No. & Farm	Location	
Heydrick-Stumpf	2-White	Blk-15 Sec-40	ATNCL
Pet. Prod	12B-Kunkel	Sec-3	BBB&C
Trahan et al	1A-Netherton	Sec-104	ATNCL
Fischer et al	1-Harris	Blk-4	Meade
Shappell	12-Lyles	Sec-7	Hooper-Wade
Heydrick Camp	1-Wilson	.....	Howard
Humble	9-Kunkel	Sec-3	BBB&C
Panhandle	1-Stewart	Blk-57	Meade
Goldsmith-King	2-Kunkel	Sec-4	BBB&C
Barnsdall	1-Wilson	Blk-5 Sec-128	ATNCL

Baylor County

Consolidated	1-Portwood	Sec-1281	TE&L

Cooke County

Bridwell et al	1-Barrows	.....	MEP&P
Simmons	4-Wheelock	.....	Teal
Lloyd	5-Wheelock	.....	Underwood
Shell	6-Field-Bowers	.....	Stanley

Wilbarger County

Staley-Wynne	R3-Waggoner	Blk-4 Sec-26	H&TC
Fain-McGaha	L14-Waggoner	Blk-4 Sec-31	H&TC
Fain-McGaha	W19-Waggoner	Blk-4 Sec-32	H&TC
Simpson-Fell	A4-Waggoner	Blk-2 Sec-36	H&TC

Wichita County

Hi Land	3-Crudup	League 4 Blk-10	DCSL
Ryan	110-Nance	.....	Fowler
Hunter	9-Waggoner	Blk-1	George
Omahundro	1B-Pace	.....	Scott
Ridgeway	1-Obenhaus	Blk-276	Waggoner
Comac-Prairie	1C-Bishop	.....	Netherly
Cons.-Turner	1-Barton et al.	Blk-4	KWVFL
Star	2B-Crudup	League 4 Blk-10	DCSL

Young County

Panhandle	1-Ward	.....	Jameson
Panhandle	3D-Prideaux	.....	T&GN
Madden-Hunt	1-Dietrich	.....	Stell
Riggs-Williams	1-Senkel	Sec-1917	TE&L
Chandler et al	1-Cullers	.....	Stinnett
Bonner	1B-Davis	Sec-1395	TE&L
Parks et al	6-Carpenter	.....	Sergeant
Perkins-Cullum	4-Lemmons	.....	BBB&C
Hawkins	7-Owens	.....	BBB&C
United Prod	1-Kunkel	.....	Stell
Goldsmith-King	2-Kunkel	.....	Stell
Moran et al	1-Hoffman	.....	Averett
Underwood et al.	10B-Campbell	Sec-1390	TE&L
Terrell	1-Lorimare	Sec-253	TE&L

PANHANDLE

Carson County

Osborne et al	3-Percival	Blk-3 Sec-199	I&GN

Gray County

Danciger	5-Morse	Blk-26 Sec-1	H&GN
Travis et al	1-Webb	Blk-25 Sec-61	H&GN
Holbrook et al	1-Deal	Blk-25 Sec-10	H&GN
Lyon et al	1-Morse A	Blk-26 Sec-1	H&GN

Hutchinson County

Texas	3-Moore-Langdon	Blk-4 Sec-125	I&GN

Wheeler County

Murchison-Fain	4-Close	Blk-23 Sec-75	H&GN

WEST TEXAS

Crane County

Magnolia	17-Hardwick-University	Blk-30 Sec-39	University Lds.
Church-Fields	4-Duoll	Blk-30 Sec-39	University Lds.

Glasscock County

Simms	1-Coffee	Blk-33 Sec-22	T & P
Shell	1B-Kloh et al.	Blk-33 Sec-11	T & P
Sun	4-Phillips	Blk-33 Sec-14	T & P

Howard County

Continental	4-Kloh-Ramsey	Blk-33 Sec-13	T & P
Continental	5-Kloh-Ramsey	Blk-33 Sec-13	T & P

Mitchell County

Gibson-Johnson	3-Scott	Blk-19 Sec-11	
Gibson-Johnson	2-Scott	Blk-19 Sec-7	
Gibson-Johnson	1-Scott	Blk-17 Sec-14	SPRR

Pecos County

Continental	4A-University	Blk-17 Sec-6	Univ. Lds.
Continental	5A-University	Blk-17 Sec-6	Univ. Lds.
Continental	6A-University	Blk-17 Sec-6	Univ. Lds.
Landreth	1G-University	Blk-16 Sec-31	Univ. Lds.
Landreth	2G-University	Blk-16 Sec-31	Univ. Lds.
Landreth	3G-University	Blk-16 Sec-31	Univ. Lds.
Landreth	2D-University	Blk-16 Sec-31	Univ. Lds.
Webb	2-Webb	Blk-OW Sec-312	Scott
Taylor Link	8-University	Blk-16 Sec-31	Univ. Lds.
Taylor Link	9-University	Blk-16 Sec-31	Univ. Lds.
Continental	2A-University	Blk-17 Sec-6	Univ. Lds.
Continental	3A-University	Blk-17 Sec-6	Univ. Lds.
Texas	2-McDonald	Blk-12 Sec-46	H&GN
Walsh et al	1-Hollingsworth	Blk-11 Sec-24	H&GN
Walsh et al	1-Stockton Cattle	Blk-11 Sec-32	H&GN
Condor	1-Wangeren Estate	Blk-11 Sec-52	H&GN
Sides-Cloyd	2-Blackstone-Slaughter	Blk-A2 Sec-34	TCRR
Mid Kansas-Transcontinental	32A-Yates	Sec-34½	
California	5-Smith	Blk-194 Sec-37	TCRR

Upton County

Texas Pacific	14-Lane	Sec-5	GC&SF
Texas Pacific	6-Shank	Blk-3 Sec-5	MK&T

Ward County

Atlantic-Delmar	5-Hazlett	Blk-5 Sec-17	H&TC
Shipley et al	4-Hazlett	Blk-5 Sec-17	H&TC
Atlantic-Delmar	4-Hazlett	Blk-5 Sec-17	H&TC

Completions in Texas, Week Ended October 19, 1929

NORTH CENTRAL & EAST CENTRAL

Brown County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
American Maracaibo	18-Bush	Kenney	Blk-624	1125-1128	8
Border	4-Munselle	Arenbeck	Blk-3	1162-1167	25
Humble	1-Johnson	Johnson		1301-1311	25
Lloyd	27-Collier	Smith	Blk-139	423-424	5
Smith	1-Kesler	Kesler	Sec-42	1315-1317	25
Smith	4-Trueheart	Lamar	Blk-638	1136-1139	25
Texas	7-Kesler	Kesler	Sec-42	1301-1323	330
Ven-Mex	7D2-Hickman	McGloin	Blk-801	1274-1886	20
Gore-Brown	1-Dabney	Cherry	Sec-15 Blk-25	T. D. 654	Dry
Sawyer et al	1-Reaves	Belknap	Blk-633	T.D. 1356	Dry

Callahan County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
McClomahon-Eastland	1-Powell	BBB&C	Sec-105	T.D. 1307	Dry
Testerman	1-Alney	TE&L	Sec-2272	415-426	3
Testerman	2-Alney	TE&L	Sec-2272	283-294	5
Testerman	3-Alvin	TE&L	Sec-2272	273-275	3

Coleman County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Rex Tex Py Tex.	2-Baker	Fisk	Blk-630	1375-1387	10
White Eagle	6-Morris	Webber		2039-2042	450
White Eagle	8-Morris	Webber	Sec-25 Blk-722	2020-2029	150
Broderick-Calvert	3-Weaver	Gable	Sec-7 Blk-271	T. D. 1873	Dry
Charter	5-Crump	Scott	Sec-13 Blk-665	T. D. 1875	Dry
Midwest Explor.	1-Buck	Cochran	Blk-269	T. D. 2033	Dry
Morrison-St. John	1-Young Bros.	Greer	Blk-192	T. D. 1970	Dry
Owens Inc	1-Curry	Mixon	Sec-3 Blk-628	T. D. 1342	Dry
Stepp-Keister	5-Moody	Scott	Sec-12 Blk-665	T. D. 1872	Dry

Eastland County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Dyar Bros	2-Cunningham	Epperson		T. D. 4100	Dry
Chestnut-Smith	1-Alexander	H&TC	Sec-62 Blk-4	3434-3464	50

Erath County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Mingus	1-Smith	Bishop		3239-3245	181½M

Falls County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Kollam Drlg	2-Jones	Hampton		T. D. 1797	Dry

Hill County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Fentress et al	1-Reynolds	Sullivan		T. D. 830	Dry
McElmurry-Keith	1-Coates Est.	McDonald		T. D. 1420	Dry
Thomas-Bland	1-Clark	Patton		T. D. 830	Dry

Jack County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Bryson	1-Loving	T&NO		3252-3259	456

Jones County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Clark et al	1-Miller	T&P	Sec-29 Blk-18	T. D. 2480	Dry

Shackleford County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
French et al	1-Dawson et al.	ET	Sec-184	T. D. 1715	Dry
Hughes et al	1-Davis	T&P	Sec-44 Blk-13	T. D. 1753	Dry
Simmons	1-Harvey	T&P	Sec-8 Blk-14	T. D. 1901	Dry
Van Zandt et al	1-Dodson	BAL	Sec-1	676-682	5

Stephens County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Mesa	1-Corbett	TE&L	Sec-1094	T. D. 3880	Dry
McLaran	1-Jackson	T&P	Sec-44 Blk-6	T. D. 3806	Dry

Throckmorton County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Harbon et al	1-Hughes	TE&L	Sec-902	T. D. 700	Dry

NORTH TEXAS

Archer County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Pet. Prod	10-Kunkel	BBB&C		1115-1138	65
Shappell	11-Lyles	Hooper et al.	Sec-7	1707-1708	10
M & V Oil Co	1-Kunkel	Stell		1154-1161	60
Burns	1-Harris	Harris	Blk-75	T.D. 1518	Dry
Heydricks-Stumpf	1-White	ATNCL	Sec-41 Blk-2	T.D. 1727	Dry
Long et al	1-Dominey	Harris	Blk-108	T.D. 1507	Dry
Maxon Jr	5-Green	Levins		T.D. 1110	Dry
Pandem	1-Hausler	Sanderford		T.D. 1200	Dry
Silkwood et al	1-Longley	Hinds		T.D. 1002	Dry

Cooke County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Danciger	8-Huggins	SP		1106-1141	110
Danciger	9-Huggins	SP		1151-1159	120
Kewanee	B9-Hyman	ET		1072-1495	517
Danciger-Stainforth	1-Field	Allen		T.D. 1508	Dry

Cottle County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
The Exploration.	3-Matador Land & Cattle Co.	Stephens	Sec-46	T.D. 4003	Dry
Sun	1-Carbrough	W&NW	Sec-551 Blk-4	T.D. 4353	Dry

Montague County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Reynolds Drlg	1-Bryant Est.	Hardin		T.D. 2518	Dry

Wichita County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Panhandle	10-Burnett	Meade		T.D. 1458	Dry
Panhandle	9-Burnett	Meade		1419-1435	25

Wilbarger County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Empire	C13-Waggoner	H&TC	Sec-25 Blk-4	1895-1898	99
Empire	C15-Waggoner	H&TC	Sec-25 Blk-4	2370-2374	112
Fain-McGaha	L8-Waggoner	H&TC	Sec-31 Blk-4	2307-2308	80
Staley-Wynne	B6-Waggoner	H&TC	Sec-25 Blk-4	1883-1890	85
Waggoner	J11-Waggoner	H&TC	Sec-25 Blk-4	2402-2432	102
Empire	A12-Waggoner	H&TC	Sec-32 Blk-4	2305-2307	150
Empire	A13-Waggoner	H&TC	Sec-32 Blk-4	1881-1883	205
Empire	B22-Waggoner	H&TC	Sec-32 Blk-4	2302-2305	207
Golding-Cochran	K2-maggoner	H&TC	Sec-4 Blk-17	T. D. 1940	Dry
Golding-Cochran	L1-Waggoner	H&TC	Sec-7 Blk-5	T. D. 1930	Dry
Grayback Dev.	1-Waggoner	H&TC	Sec-37 Blk-4	T. D. 1969	Dry
Harris	1-Waggoner	H&TC	Sec-22 Blk-4	T. D. 1947	Dry
Harris-Watchorn	1-Waggoner	H&TC	Sec-109 Blk-14	T. D. 2050	Dry
Knight et al	A6-Waggoner	MEP&P	Sec-40	T. D. 1880	Dry
Lewis Prod	B6-Waggoner	H&TC	Sec-17 Blk-4	T. D. 2481	Dry
Loenthall-Dyson et al.	1-Waggoner	SP	Sec-4	T. D. 2003	Dry
Staley-Wynne	1-Melton	H&TC	Sec-9 Blk-5	T. D. 2451	Dry
Waggoner	3-Waggoner	H&TC	Sec-18 Blk-4	T. D. 2552	Dry

Young County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Comac Drlg	1-Hausler	Poitevant		T. D. 1215	Dry
Panhandle	1-Farmer	Davidson		T. D. 852	Dry
Allday	1-Cross	TE&L	Sec-1993	T. D. 574	Dry
Riggs-Williams	1-Shatts	TE&L	Sec-1916	T. D. 602	Dry
Texas-Minton	1-Bailey	TE&L	Sec-165	T. D. 650	Dry
Panhandle	1D-Prideaux	T&GN		731-732	2
Underwood-Continental	3-Campbell	TE&L	Sec-1376	897-906	39
Bridwell	1-Cullers	Hyatt		568-574	10
Bridwell	2-Cullers	Hyatt		615-624	30
Fowler et al	1-Hill Estate	TE&L	Sec-195	1044-1045	48
Holbrook-Woods	3-Dean	YCSL	Blk-19	538-545	8
Perkins-Gullum	3-Lemmons	BBB&C		725-732	65

PANHANDLE

Carson County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Empire	1-Fuqua	AB&M	Sec-17 Blk-3	2732-2760	23M
Empire	1-Deahl	B & B	Sec-3 Blk-5	2798-2869	15M
Empire	19-Burnett	I&GN	Sec-89 Blk-5	2539	26M

Gray County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Texas	4-Faulkner	H&GN	Sec-29 Blk-B-2	2820-2823	2000
Texas	5-Davis	ACH&B	Sec-8 Blk-1	2670-2675	568
Sherwood et al	1-Gethings	H&GN	Sec-14 Blk-A-9	2761-2821	140
Phillips	7-Palmer	H&GN	Sec-31 Blk-B-2	2887-2904	170
McMann	3-Saunders	Eustice	Sec-1	2820-2828	100
Humble	1-Jackson	H&GN	Sec-90 Blk B-2	3033-3036	2444
Danciger	5-Beck	H&GN	Sec-28 Blk B-2	2852-2857	1070

Hartley County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Canadian	11A-Bivins	CSTS	Sec-38 Blk-20	T. D. 4949	Dry

Hutchinson County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Penowa	3-Smith	MTC	Sec-7 Blk-Y	2875-2920	120

Moore County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Skelly	10-Armstrong	Brazmore		3182-3183	200

Wheeler County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Osage	1-Purcell	H&GN	Sec-51 Blk-17	1802-1891	12M
Upham	1-Shelton	H&GN	Sec-22 Blk-24	1808-1871	38M
Martin-Debons	1-Close "A"	H&GN	Sec-100 Blk-23	1655-1817	25M
Magnolia	1-Laycock	H&GN	Sec-9 Blk-27	2251-2329	81½M
Vaughan et al	5-Ackley	H&GN	Sec-4 Blk-27	1840-1864	40M

WEST TEXAS

Crane County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Simms-Atlantic	10A-Univ.	Univ. Lds.	Sec-39 Blk-30	2998-3040	150
Church-Weekly	3-Duoll	Univ. Lds.	Sec-39 Blk-30	2855-3025	50

Culberson County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Deep Rock-Grisham-Hunter	3-Kloch	T&P	Sec-39 Blk-59	T.D. 1602	Dry

Garza County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Gulf	1-Streek	H&GN	Sec-7 Blk-8	T.D. 4115	Dry

Howard County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Merrick-Bristow	9-Hanks	W&NW	Sec-140 Blk-29	1941-1955	75

Pecos County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Continental	1A-Univ.	Univ. Lds.	Sec-6 Blk-17	990-992	200
World	1B-University	Univ. Lds.	Sec-13 Blk-18	1540-1622	107
Phillips	1-Southwestern	T.M.	Sec-73 Blk-OW	T.D. 1660	Dry

Regan County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Big Lake	167-University	Univ. Lds	Sec-1 Blk-2	3047-3083	50
Big Lake	168-University	Univ. Lds.	Sec-1 Blk-2	2982-2985	100
Big Lake	169-University	Univ. Lds.	Sec-36 Blk-1	3093-3102	250
Big Lake	170-University	Univ. Lds.	Sec-1 Blk-2	2420-2422	175
Big Lake	172-University	Univ. Lds.	Sec-1 Blk-2	2415-2423	175
Big Lake	173-University	Univ. Lds.	Sec-1 Blk-2	2884-2889	125

Valverde County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Producers et al	1-Everett	CCSDRGNG	Sec-40 Blk-DB	T.D. 2523	Dry

Winkler County

Company	Well Farm	Survey	Sec. & Blk.	Depth	Init. Prod.
Atlantic	B6-Hendricks	PSL	Sec-44 Blk-26	2830-2899	700
Shell	7-Scarborough	PSL	Sec-2 Blk-77	2942-3371	87
Texas	1-Kloh	T&P	Sec-35 Blk-46	T.D. 4011	Dry

Completions in California, Week Ended October 12, 1929

Long Beach

Company	Well No.	Location	Depth	Init. Prod.
Shell Oil Co	Brown 2	....	7839	25
Western Oil Refineries	Liebert Com. 1	....	4553	150

Santa Fe Springs

Company	Well No.	Location	Depth	Init. Prod.
Getty Geo. F	37	....	7753	1600
General Pet. Corp.	S. F. 233	....	6608	400
General Pet. Corp.	185 D	....	6940	240
General Pet. Corp.	Jalk 113	....	8363	208
Ring Petroleum Co.	Santa Fe 1	....	7930	2800
Shell Oil Co	G. H. & N. 20	....	6490	54
Shell Oil Co	G. H. & N. 23	....	7847	3124
Shell Oil Co	Thompson 6	....	8097	330
The Texas Co	Standlee 3	....	5027	54
Twin Bell Oil Co	Gros 3-2	....	7983	4300
Union Oil Co	Bell 36	....	6850	750
Wilshire Oil Co	Baker 5	....	7985	3500

Richfield

Company	Well No.	Location	Depth	Init. Prod.
Superior Oil Co	Guarantee 3	....	4500	211

Seal Beach

Company	Well No.	Location	Depth	Init. Prod.
Standard Oil Co	S. G. 16	....	5409	122
Standard Oil Co	S. G. 23	....	5412	68

Elwood

Company	Well No.	Location	Depth	Init. Prod.
Barnsdall-Rio Grande	Tideland Permit 88	....	3477	4800

Ventura Avenue

Company	Well No.	Location	Depth	Init. Prod.
Pacific Western Oil Co.	S. P. 2	....	7365	300 (water and oil)

Maricopa Flats

Company	Well No.	Location	Depth	Init. Prod.
Doyle Petroleum Co.	Weir 2	....	3450	1027
North Amer. Cons.	Sunset 2	....	3090	980
Rio Grande Oil Co.	Havenstrite 1	....	3351	4060

Land Trading in Western Kansas Almost at a Standstill

By William F. Lowe
N. P. N. STAFF WRITER

TULSA, Oct. 18

LAND trading in western Kansas of late assumed the aspect of temporary pause. Whether this is due to pessimism or good guessing on the part of the operators has not as yet been determined, but whatever the reason, it seems to be a good one. Even the oil found in four widely separated producers west and south of Fairport, the principal pool of the territory, failed to boost prices above $10 an acre, and the enthusiasm thrown off by these discoveries generated reverse English before it had traveled very far.

There is still plenty of acreage to be had for the drilling of a well if the contractor is willing to dig through the section to granite. Owners of the larger blocks are in no hurry to do the testing themselves for their attention is on areas where there is a greater return at less risk. At least, returns in other places look better. Besides, reason many of the owners of large acreage blocks, why rush into a new area when the leases still have eight or 10 years to run? The discovery of a new pool would only add to the already large supply of worries.

Dry holes in most of the counties are plentiful but they do not all constitute tests, for many stopped short of the deeper horizons where pays might be expected in the Wilcox or the Siliceous lime. This is particularly true in the southwest where deeper drilling is necessary due to the thickening of the section. The small pays and rapid decline of the present producing wildcats indicate clearly that bigger production must be found in the lower horizons before the area merits widespread testing.

The big land blocks purchased by operators in western Kansas are, for the most part, located on a general north-south trend, with the conscious effort to follow the supposed axes of the subsurface structures, very noticeable on the maps of the area. If the land plays are on these axes, the property map almost serves the purpose of one with regional contours. However, the structures themselves are not yet quite so well defined for there is still much to be done in a geologic way before they are completely subdued. In this region where correlation is so difficult and unconformities so confusing, the drill is about the only way of determining what the lower structures are.

The fact that surface structures in western Kansas do not always bear a direct relation to subsurface folds, has been one of the principal difficulties encountered by the geologist. There is nothing new in such a condition, nor is it peculiar to this locality, for there are many other places in the Mid-Continent where this feature has caused trouble.

Some of the best looking plane table maps have been completely discounted by core drilling, while wells put down on these structures have proven to be very expensive disappointments. This inconsistency or inconsideration on the part of surface indications, in their failure to conform with the folds of the lower formations, was one of the chief reasons why operators were a little shy about entering the territory with serious intentions.

Such was the case several years ago when M. M. Valerius and V. H. McNutt, geologists, were trying to convince the major oil companies that Russell county had a structure meriting consideration. The original detail map in this county had been made on the top bed, or "fence post" limestone, of the Pfeifer shale member of the Greenhorn limestone, which outcrops over a part of western Kansas.

The map was good and the structure evident, but the expected enthusiasm of the large investors was not forthcoming because that part of the state was thought to be too highly speculative. The well that finally proved the geologists' contention had to be financed under the name of the M. M. Valerius Oil & Gas Co., and resulted in the discovery of the Fairport field.

SINCE that time several major subsurface structural features have been fairly well outlined while others are conjectured, and it is upon these that the most interesting wells are now being drilled.

The land plays, as shown on the accompanying map, parallel the north-south or northeast-southwest trend of these buried ridges. The southern limit of extension of these structural highs is not yet known though the operators seem to be more interested in their number and quality than in their extent.

In Graham, Trego, Ellis, and Scott counties a number of anticlinal folds have been mapped on the Niobrara formation which is made up of massive beds of easily eroded and very brittle chalk. When checked later with magnetometer and core drill it was found that dips and strikes were anything but uniform and that slumping had been mistaken for true dip.

Further study of the upper member of the Niobrara formation, the Smoky Hill chalk, has strengthened the conviction that it is one of the most unreliable beds for mapping that is found in the section, unless great care is used in the reading of local dips. It is highly faulted and contains many folds that bear very little relation to the lower anticlines.

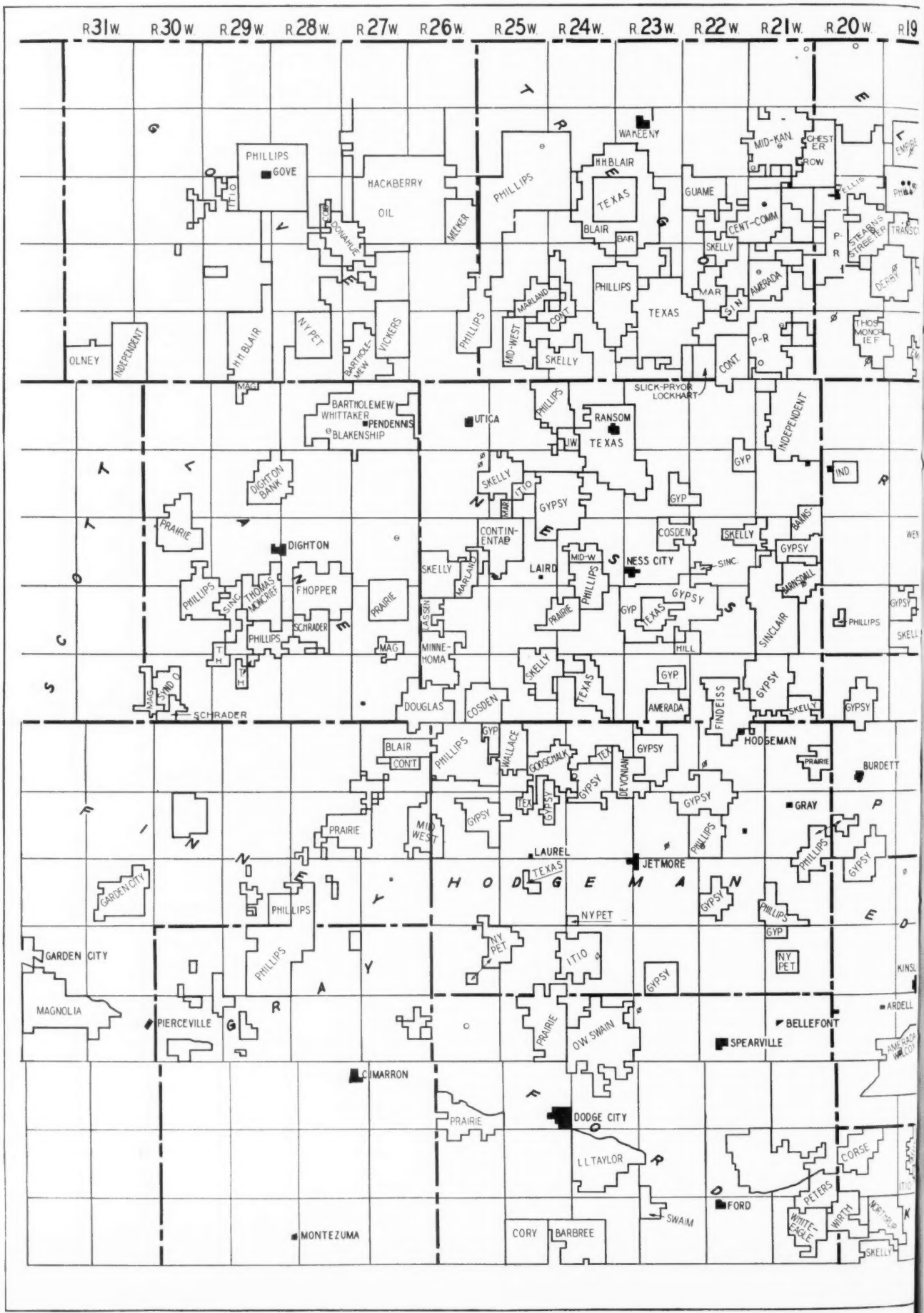
THE origin, or method of formation, of these surface folds is not yet settled to the satisfaction of all the geologists who know the area. Two explanations are offered and both have their supporters. Twenhofel advanced the theory several years ago that differential compaction was the probable cause. His idea was that muds and clays would, under pressure of overlying beds, be more compressible than unconsolidated sands such as occur in the sandbars of streams or offshore in larger bodies of water.

With the increase of overburden, the differential compaction of the several beds would cause the seeming bending of the more compressible clay shales over the harder lenses of sandstone. The result would be a mound, and beds subsequently deposited on it would conform to its general outline on the surface.

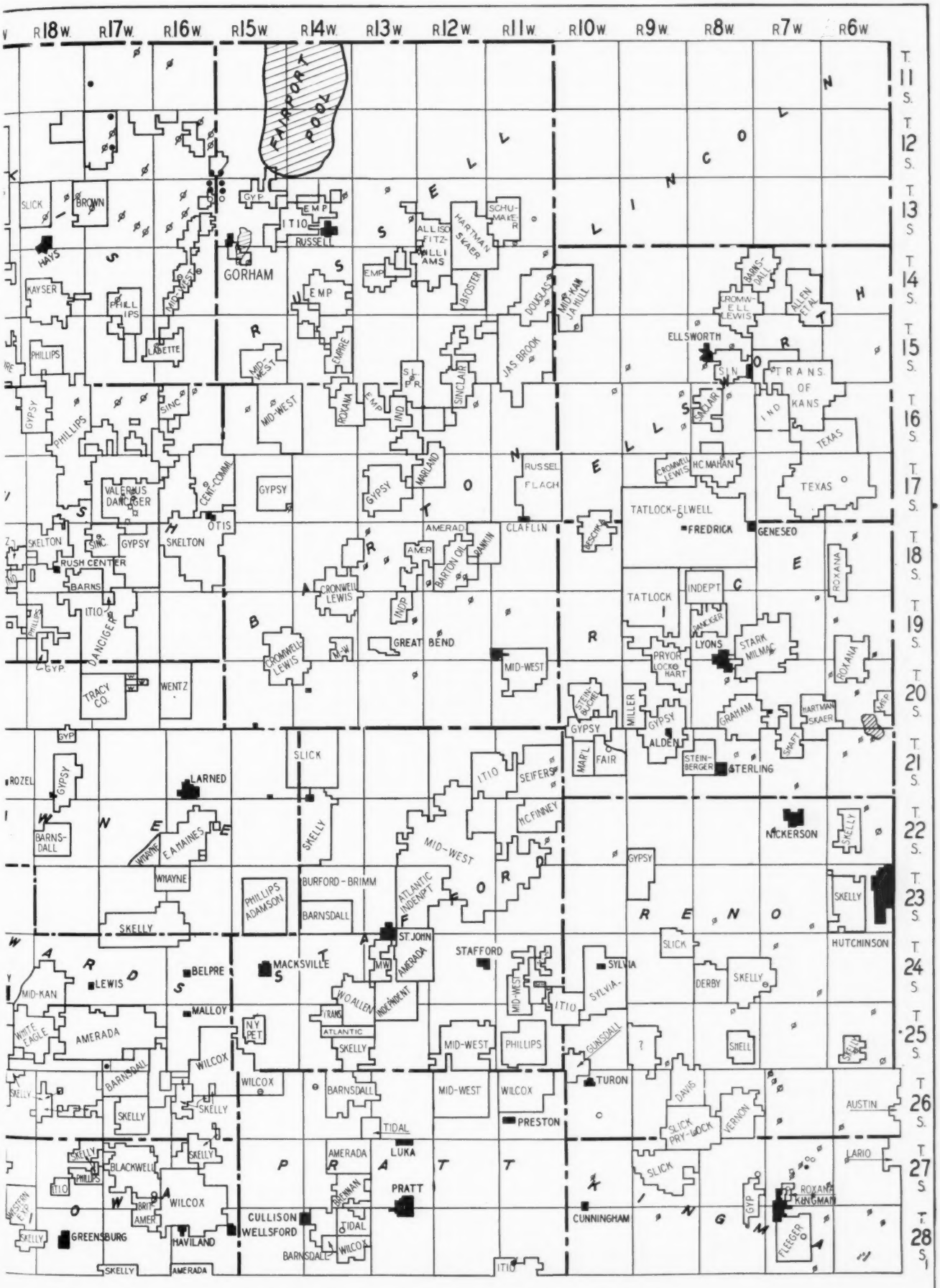
Exception is taken to this theory by Russell who contends that the surface structures of the Niobrara formation of western Kansas are more the result of deformation due to structural forces within the earth's crust. He questions whether the beds were buried to a sufficient depth to produce the compaction necessary for formation of the type of structures found in the region. Tension due to stretching, as the brittle Niobrara adjusted itself to the crustal deformation, is the explanation given by Russell for these folds in the upper Cretaceous.

The leaching out of salt beds or local subsidence due to solution cavi-

Map Showing the North-South Trend of the



Large Acreage Blocks of Western Kansas



ties may also have played a part, but regardless of their origin, they were largely responsible for the tardiness of operators in making a land play. As oil shows or small producers were found in the wildcats, and core drills found verification for some of the surface suspicions, property changed hands with a spurt in those localities. But as dry holes appeared as offsets to producers and others failed to get even a good show, pessimism again acted as the brake to further buying.

THE major structural features, such as the Fairport, Stockton, and Cambridge anticlines, probably owe their origin to those forces which formed similar structures in Oklahoma between the Ozark uplift and the Rockies. Their principal difference lies in the fact that the steeper slopes in Kansas are on the western side of the folds and that great faults probably parallel the axes in many cases.

Other pronounced structural highs have been found in western Kansas, largely by geophysical methods, and as geologic exploration continues it is thought that a series of great, approximately parallel, folds, having a general north-south trend will complete the subsurface picture. Regional dips of the Pennsylvania and older rocks are northwesterly, while the Cretaceous formations, in which the small deceptive surface structures are found, dip generally to the northeast.

Of the wells that have been completed as producers in the western part of the state, all are thought to have their pays in the basal Pennsylvanian conglomerate. To date there is but one possible exception, the No. 1 King of the Central Commercial Oil Co., in 20 13S-21W, in Trego county. This well was one of the first wildcat producers west of the Fairport field and caused one of the land buying flurries.

It is bottomed at 3972 feet in what appears to be a true sand, said by some geologists to be upper Simpson. If this is true then the area has a decided appeal, for Simpson production at that depth would be very encouraging. However the concensus of opinion is that the well is producing from the unconformable contact of the Pennsylvanian and Ordovician.

The well had an initial of 200 barrels early in June of this year but the decline has been rapid and it is only making about 35 barrels at the present time. It has been holding steady at that figure for some weeks. The oil is "sweet" and with an A. P. I. gravity of 34 degrees it is a slightly better grade of crude than is found at Fairport.

In Ellis county, the Phillips Petroleum Co.'s No. 1 Johnson, 9-13S-L9W, drilled on what is locally known as the Yocemento structure, is pumping 100 barrels a day from the "Gorham" sand. The well has shown such a rapid decline that it will probably be deepened in search of production in lower horizons.

On the same structure and near the Phillips well, the Barnsdall Oil Co., recently completed its No. 1 Johnson for an initial of 250 barrels at a total depth of 3600 feet. Four miles north of these wells the Empire Gas & Fuel Co., got a dry hole in the same horizon and its joint venture with the Derby Oil Co., seven miles to the south, had the same kind of luck. So it looks as if the pool is to be a small local development.

The Mississippian is almost entirely absent in the section of wells north of the Barnsdall Oil Co., well in Ness county. This well, No. 1 Lonk, CSW 35-18S-21W, had some Mississippian and was carried to the Siliceous lime. There was no production in the "Wilcox" though a good oil show was encountered from 4175 to 4200 in the erosion zone at the base of the Pennsylvanian.

South and east of this well, in Edwards county, the British-American No. 1 McCarty, 31-25S-17W, is producing from the same horizon at a total depth of 4570. It is very possible that the deepening of this well would find the "Wilcox" and a very interesting geologic section.

Such a section was found in Kiowa county by this same company in its No. 1 Woodward, 35-27S-17W, where the "Wilcox" was topped at 5009 feet. At 5035 T. D., the hole was full of water and the well is to be plugged and abandoned. It is considered high on the Ordovician and other wells are spudding on the same trend in Pratt county. Two of these wells are the O'Haver-Jones No. 1 Garacke, C NE NW 7-26S-14W, and the Wilcox Oil & Gas Co., No. 1 Battin, SW NW 7-26S-15W.

"Western Kansas can wait," seems to be the stock phrase of most of the companies, yet they keep their geologic parties in the field, and put down occasional holes in the hope of proving that all the hard things said about the county are not true. All seem to agree that the southwestern counties look the best for future production and that it will be the deeper sands that will make the best pays. But the land men do not enthuse and the low prices have ceased to attract them temporarily.

Magnolia Pipe Line Runs In Aug. and Sept.

HOUSTON, Oct. 17.—Magnolia Petroleum Company, pipeline department, announces from Dallas headquarters the following crude oil runs for September, which are shown in comparison with August.

	August	September
Hewitt-Graham	151,057.87	143,516.68
Healdton	213,264.58	202,409.57
Cushing	105,393.78	104,111.56
Yale	42,323.40	40,840.79
Augusta	35,805.82	34,056.25
Wewoka	1,037,180.92	813,908.90
Seminole	51,179.87	46,834.03
Total Okla.Kans.	1,636,206.24	1,385,677.78
Archer	20,485.72	20,912.32
Burkburnett	62,551.69	59,576.75
Comanche	16,355.25	16,383.34
Electra	83,618.83	80,676.16
Corsicana—Heavy	9,124.19	8,831.57
Coriscana—Light	12,176.94	12,348.69
Henrietta	2,072.97	2,111,50
Iatan	15,941.35	15,122.84
Luling	301,108.50	284,904.59
Lytton Springs	31,740.06	29,712.49
Mexia-Wortham	21,609.89	19,828.80
Mirando	176,908.39	169,943.46
Olden	8,680.75	8,443.92
Panhandle	103,264.14	80,976.90
Panola	877.38	836.07
Stephens	8,091.85	8,178.58
Thrall	1,154.00	983.19
Crane-Upton	69,287.91	62,917.65
Glasscock	54,315.18	47,932.33
Winkler	66,199.71	62,473.15
Shelby	.....	293.72
Total Texas	1,067,564.70	993,388.02
Haynesville	3,832.47	5,588.96
Bull Bayou	40,421.84	31,960.22
Cotton Valley	21,542.14	22,706.97
Pine Island	26,860.77	24,260.54
Hackberry	24,207.99	21,664.95
Total Louisiana	116,865.23	106,181.64
El Dorado, light	7,774.84	6,131.70
East El Dorado	4,039.74	3,276.13
Smackover	65,495.32	61,836.37
Rainbow	41,054.11	37,085.58
Total Arkansas	118,364.01	108,329.78
GRAND TOTAL	2,939,000.18	2,593,577.22

OKLAHOMA-KANSAS

Report for September		Dly. Avg.
Runs	1,967,530.00	65,584.00
Shipments	2,198,023.00	73,268.00
Total stock	9,423,863.00	.....

TEXAS

Wichita, Wilbarger, Archer		
Runs	177,798.00	5,927.00
Shipments	182,896.00	6,096.00
Petrolia		
Runs	2,112.00	70.00
Shipments	1,862.00	62.00
Eastland, Stephens		
Runs	33,006.00	1,100.00
Shipments	.....	.....

TOTAL, STOCK—125,053.00—North Central Texas Field.

Prairie Pipe Line Co.'s runs in September fell below the August figure about 5,000 barrels daily. In September total shipments were 6,552,481 barrels, or 218,416 barrels daily while in August a total of 6,929,411 barrels, or 223,529 barrels daily were delivered to customers.

New Patents

Prepared by R. E. Burnham, patent and trade-mark attorney, Continental Trust Building, Washington, D. C., from whom copies may be obtained at the rate of 20c each. State number of patent and name of inventor when ordering.

October 8, 1929

REFINING

Apparatus for condensing hydrocarbon vapors—John E. Bell, Brooklyn, N. Y., assignor to Sinclair Refining Co., New York, N. Y. Filed Jan. 22, 1925. No. 1,730,350.

Process of and apparatus for distilling petroleum—Eugene H. Leslie and Edwin M. Baker, Ann Arbor, Mich. Filed March 20, 1923. No. 1, 730,891.

Art of distillation—Eugene H. Leslie, Ann Arbor, Mich. Filed April 19, 1923. No. 1,730,892.

PRODUCTION

Pump-valve—Ral L. Davis, Wheeling, W. Va. Filed May 25, 1928. No. 1,730,452.

Fishing-tool—June L. Kibrell, Saskawa, Okla. Filed July 3, 1928. No. 1,731,070.

Derrick-cap—Edward P. Bathurst, Represa, Cal. Filed Oct. 11, 1926. No. 1,731,121.

Drill-stem—Jesse P. Miller, Houma, La. Filed Sept. 15, 1924. No. 1,731,171.

MISCELLANEOUS

Outlet-valve for tank-cars—Samuel E. Turner, Wichita Falls, Tex., assignor to Panhandle Refining Co., same place. Filed Jan. 16, 1926. No. 1,730,636.

Visiting Around the Refineries

By Paul Truesdell

National Petroleum News

UNDOUBTEDLY the best way to bring about friendly feeling and cooperation between the oil and automobile industries is to get as many of the engineers of both industries together as often as possible. Such affairs as the one-day program at which the Standard of New Jersey was host to the S.A.E. at Elizabeth, N. J. on Oct. 9 are calculated to help along very greatly the growing feeling of friendly understanding between the men who build the cars and the men who lubricate and fuel them.

* * *

IT SEEMS probable that specifications are going to be more and more a factor in the marketing of petroleum products, especially such products as go to large consumers, industrial plants, truck fleet operators and so on. If so, it would seem that they should be written primarily by the oil technologists, in close and sympathetic collaboration with representatives of the users.

The decision of Committee D-2 of the American Society for Testing Materials, which is made up of representatives of both manufacturers and users of petroleum products seems a wise one.

This thought is brought up by one of the papers read at the Standard of New Jersey-S.A.E. meeting at Elizabeth, referred to above.

The paper was by a man responsible for operation of a large fleet of trucks. He asserted that as things stand at present the large truck fleet owner does not know how to buy gasoline. What the commercial vehicle operator is mainly interested in, this man stated, is low engine maintenance cost and long engine life. Brilliant performance such as the driver of the snappy passenger car demands is not important to him.

Many grades of gasoline are very good, he admits, but how is he to know which one? The engineers of the oil business have much information about economy of fuels and oils that would be valuable to the truck operator but now, he points out, there is no way for him to get it.

Probably if truck fleet owners and other large users lay their problems before Committee D-2 through users' representatives who are members of that body a solution for at least some of them will be worked out.

* * *

AFTER all, the interests of the consumer are not neglected to the extent that the above item might indicate. In many cases, individual companies are carrying out extensive and valuable research in behalf of the buyer.

The Standard of New Jersey is one of these. Even gas oil is the subject of considerable study in the Standard's Bayway plant. We are generally inclined to think of gas oil merely as a bulk product not used by the general public, not susceptible of any particular selling effort.

When I was in the Bayway plant the other day, however, I was shown a considerable installation of equipment which was designed especially for the testing of gas oil. The oil shipped from this plant for gas enrichment is sold on the basis of B.t.u. it will put into the gas and other data interesting to the buyer.

* * *

REFINERS who think their problems are new are referred to the works of one Porta, an alchemist who wrote in 1553, Mr. Porta said:

"Now we speak of oyls. These require the industry of a most ingenious artificer for many of the most excellent essences of things do remain in the oyl so close that without the greatest art, wit, cunning and pains they cannot be brought to light; so that the whole art of distillation dependeth on this."

And how.

The above quotation is taken from an article on "Distillation Methods, Ancient and Modern," by Gustav Egloff and C. D. Lowry Jr., published in the October issue of Industrial and Engineering Chemistry.

* * *

THE refinery of the Old Dutch Refining Co., at Muskegon, Mich., is now finished and in operation, according to the statement of F. H. Mitchell of the Southwestern Engineering Co. who was superintendent of construction on the plant. Announcement of the completion of the refinery is made in the October issue of the Southwestern Bulletin.

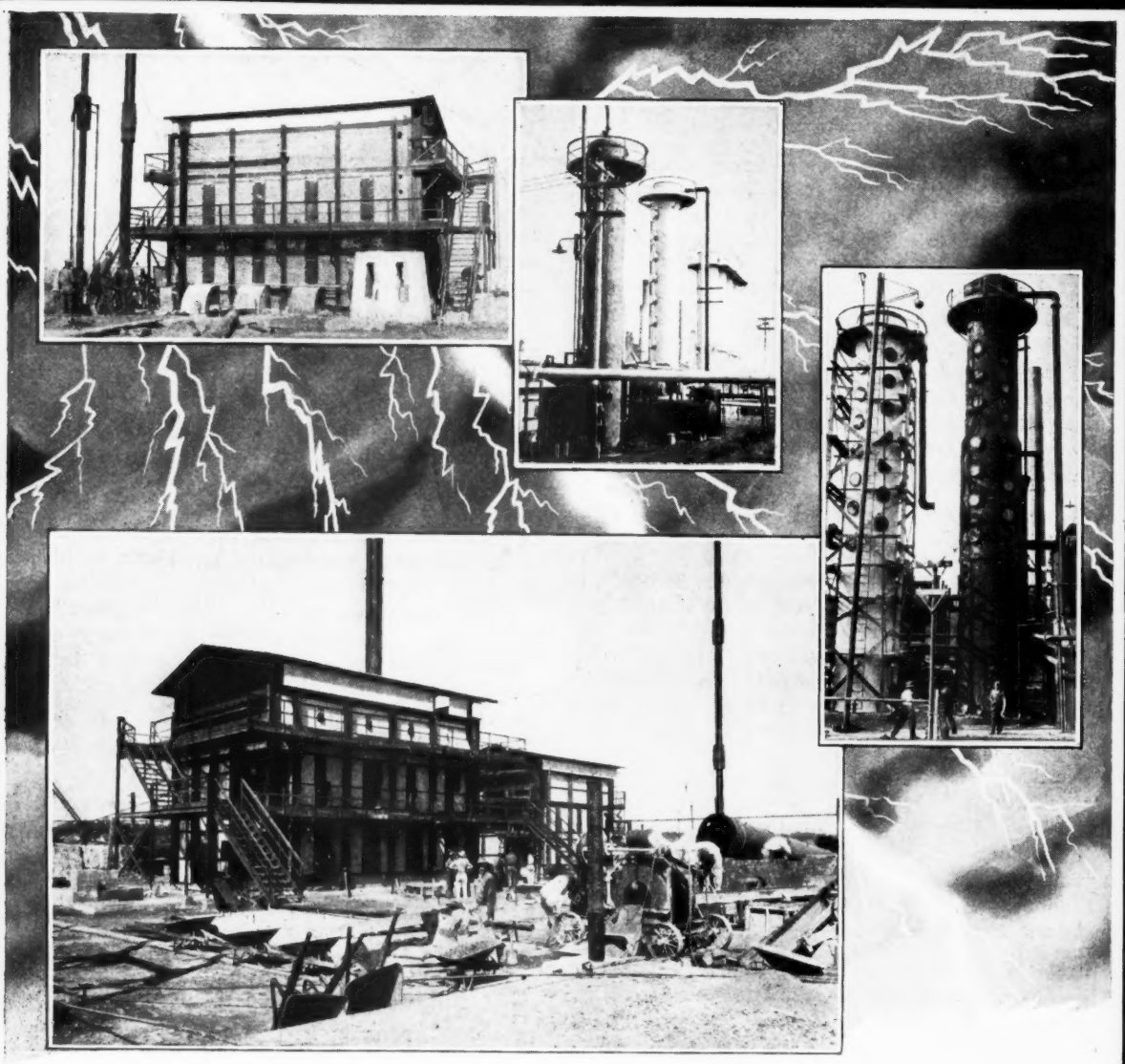
* * *

GORDON McINTYRE, chief chemist of Imperial Oil Ltd. with headquarters in Sarnia, Ont., may be entitled to the distinction of being the first oil company chemist to own and fly his own airplane. He may not be entitled to that distinction but I have never heard of any others.

Mr. McIntyre was an aviator in the British air service during the war and consequently is an expert pilot. Recently he bought a De Haviland Gypsy Moth 2-seater. His situation is particularly favorable for flying, with plenty of open space near the plant.

The problem of storing the plane is reduced to nothing with this model. It has folding wings which can be doubled back in about half a minute and the machine wheeled into an ordinary garage. Mr. McIntyre believes the cost of operating the plane is not much more than that of driving a car and he makes even 50 or 60-mile trips in it with a great saving of time when it is possible to land right where he wants to be.

The fuel he uses is fighting grade aviation gasoline containing 2 cubic centimeters of Ethyl fluid per gallon.



With lightning-like rapidity the art of refining has advanced in the last few years. WINKLER-KOCH ENGINEERING CO. has played no small part in the development of this art. The demands of the refiners for faster, better, and more economical production have been met so successfully by this competent staff of engineers that to-day over sixty of the nations leading refiners rely upon their counsel. What ever your problem may be, if it is planning and erecting a new refinery, or re-modeling present equipment, this company, devoting its time exclusively to refining engineering can aid you. Full information, without obligation, cheerfully sent on request of letter or wire.

The WINKLER-KOCH ENGINEERING CO.

Consulting and Construction Engineers

429 FIRST NATIONAL BANK BLDG.

WICHITA, KANSAS

CALIFORNIA OFFICE, 1205 PACIFIC NATIONAL BANK BUILDING, LOS ANGELES

Progress in Knock Testing

By Earl Bartholomew*

(Presented Oct. 9 before S. A. E. Meeting, Standard Oil Co. of New Jersey plant, Elizabeth, N. J.)

PART II

Part I was published in NATIONAL PETROLEUM NEWS, Oct. 16

IT HAS been necessary for the Ethyl Gasoline Corp. to determine the set of conditions for the new engine which causes automobile fuels to give the same anti-knock performance obtained by burning them in cars driven on the road. To determine exactly what the ratings of the fuels should be, two high compression automobiles have been fitted with all the equipment necessary for an accurate control of cooling water and air temperatures and are being operated on the several types of hills and roads available at the General Motors proving grounds.

In some of the tests the cars are run at constant speed while attached to a towing dynamometer, and in others they are accelerated or driven up long hills. One of the cars has a valve-in-head type engine and the other an L-head type.

In order to ensure a sufficient supply of fuels for a long series of tests, 550 gallons each of straight-run Mid-Continent, California and vapor-phase cracked gasoline and the same quantity of benzol, have been set aside.

In addition to the new type Ethyl Gasoline Corp testing engine described above, four other types of engines are being employed in the series of tests now being conducted.

Fig. 2 shows one of the knock testing engines now being made and used by the Ethyl Gasoline Corp.

Fig. 3 shows an air-cooled Delco engine connected to a synchronous generator for accurate speed control. The blower at the right is connected to the draft tube of the engine by piping provided with a damper so that the amount of air flowing over the cylinder and cylinder head surfaces may be controlled. A thermocouple in the cylinder head indicates the combustion chamber temperature.

Fig. 4 shows a large type single-cylinder liquid-cooled engine similar in design to the Ethyl gasoline testing engines but having a much larger bore.

Fig. 5 shows the variable compression engine being developed by the joint committee of the American Petroleum Institute and the Society of Automotive Engineers.

The fuels described previously are being tested in all five of these engines and simultaneously in the two special test cars. The percentage of benzol in each fuel to equal 3 cubic centimeters of lead tetraethyl is being determined as well as the volume of lead tetraethyl and percentage of benzol in the various fuels required to equal 3 cubic centimeters of lead tetraethyl in the Mid-Continent gasoline. The effect of various variables is being evaluated on each engine.

All the fuels are being rated on the liquid cooled engines with cooling liquids ranging from alcohol to pure ethylene glycol and a similar variation in temperature is being obtained on the air-cooled engine by control of the output of the cooling blower. All fuels are also being rated on each machine at a number of speeds, spark settings and throttle openings.

IN THIS somewhat comprehensive series of tests a relation is being obtained between the performance of the several fuels in automobiles as compared with their behavior in the five test engines. In addition, the variations among the various engines and the changes in detonation comparisons due to variations in engine conditions are under study.

Making anti-knock tests in automobile engines operated on the road is difficult even under the most favorable conditions. The same changes of conditions which produce variations in knock ratings in test engines operate to produce similar variations in ratings in automobile engines. Among the variables which have a bearing on the relative rating of fuels in automobile engines may be mentioned:

1. Temperature of cooling liquid.
2. Temperature of air entering the carburetor.
3. Engine speed.
4. Air pressure.
5. Humidity.
6. Amount of manifold heating.
7. Carbon accumulation.
8. Engine design.

Due to the difficulties encountered in the use of any type of indicator for registering the intensity of detonation in automobile engines, listening methods must be relied upon and the accuracy of estimation is about 0.25

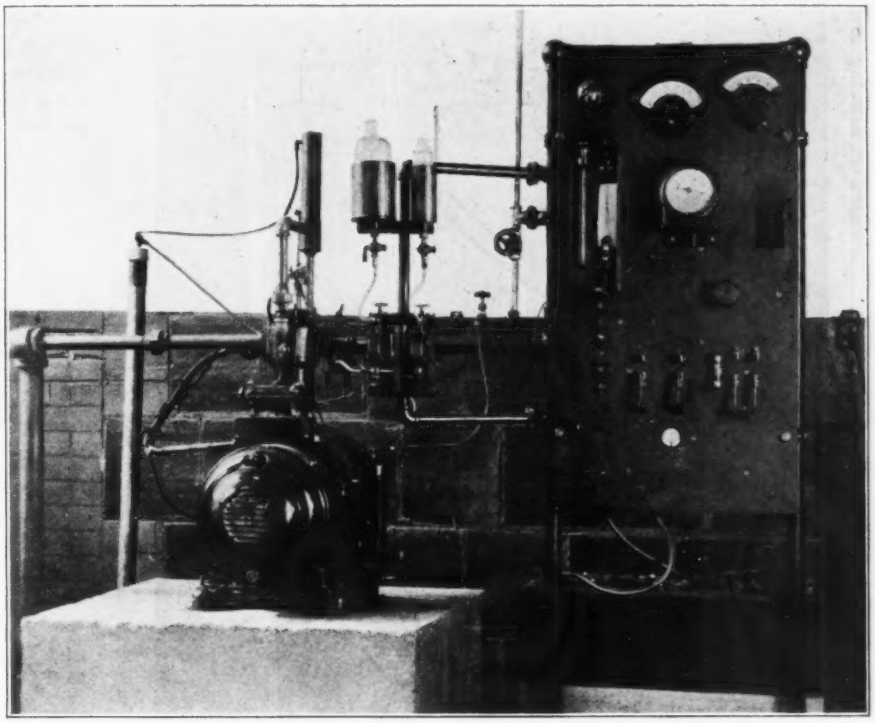
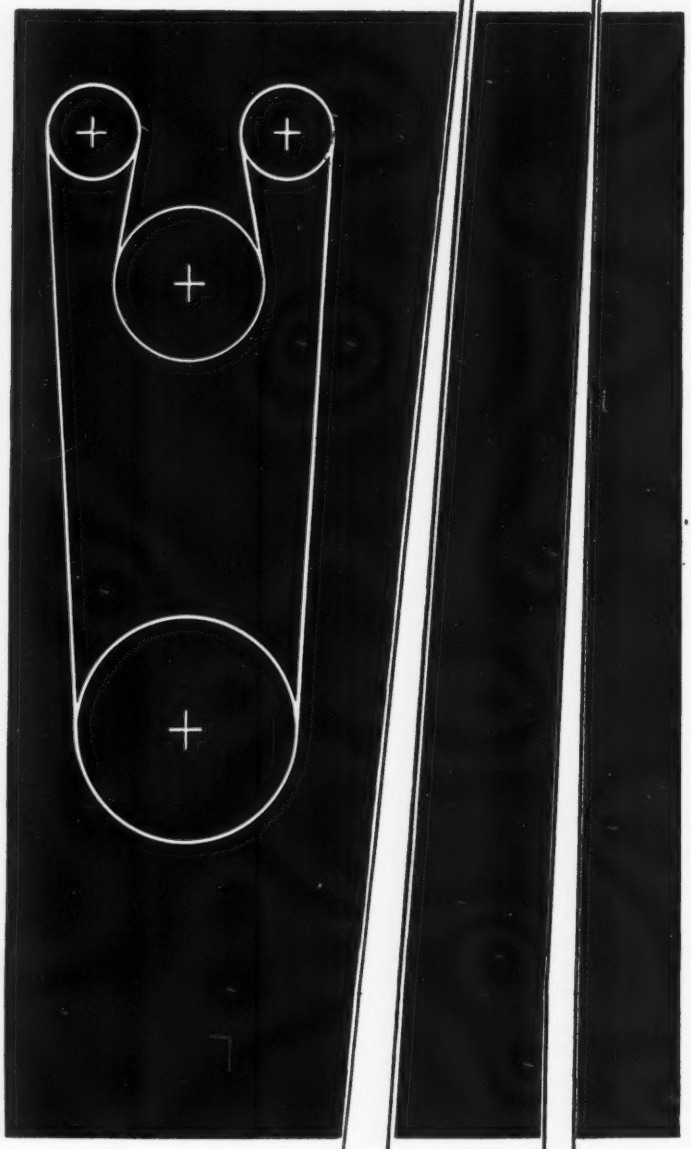
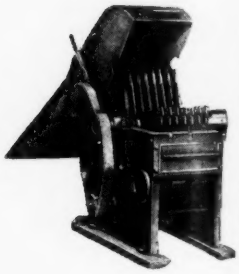


Fig. 2—Knock testing engine now being made and used by the Ethyl Gasoline Corp.

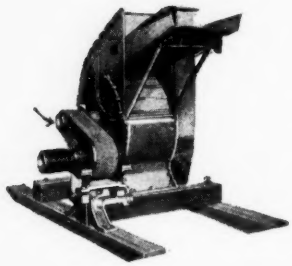
*Director, Detroit laboratories, Ethyl Gasoline Corp.

Here's the first major IMPROVEMENT

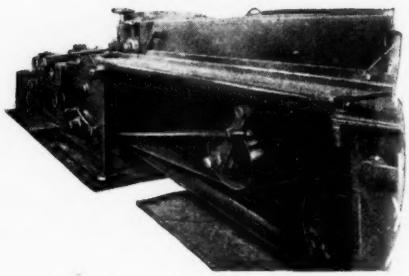




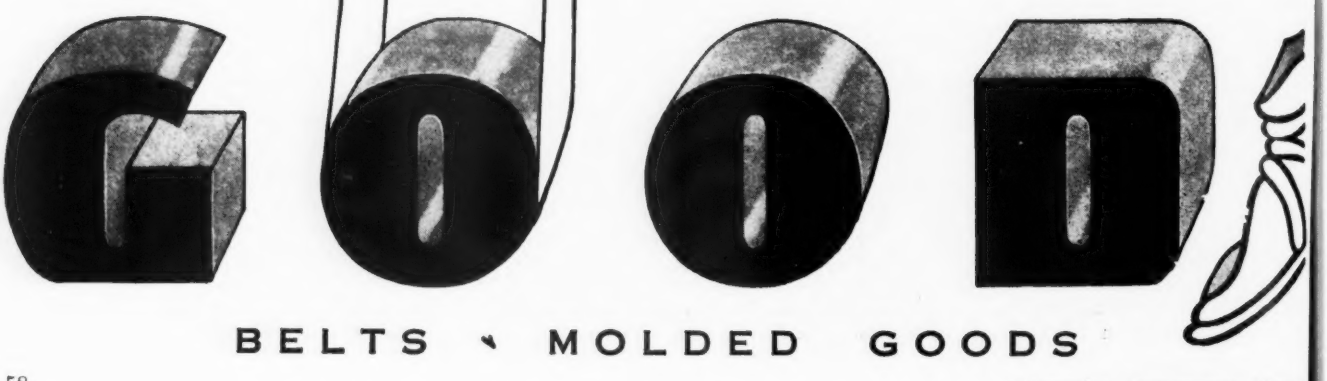
GOODYEAR ENDLESS COMPASS BELT in place on Papec Feed Grinder, manufactured by the Papec Machine Company, Shortsville, N. Y.



GOODYEAR ENDLESS COMPASS BELT in place on Jay Bee Humdinger Mill, manufactured by the Bossert Corporation, Utica, N. Y., and sold by J. B. Sedberry Inc., Utica, N. Y.



GOODYEAR ENDLESS COMPASS BELT in place on Woods hardwood flooring matcher in plant of E. L. Bruce Company, Memphis, Tenn.



BELTS • MOLDED GOODS

cubic centimeter of lead tetraethyl or its equivalent.

The fuel distribution characteristics of multi-cylinder engines operated at speeds where detonation is ordinarily encountered are such that no two cylinders receive a charge of the same mixture strength and the air-fuel ratio of the charge entering any one cylinder varies considerably.

In view of these distribution characteristics there is no such thing as a maximum knock air-fuel ratio, in the ordinary sense of the term, for an automobile engine. One or more cylinders may be operating at maximum knock mixture strength but the others at the same time are probably richer or leaner than this ratio. During acceleration or hill climbing the mixture strength in some or in all cylinders varies from the rich to the lean side of the maximum knock mixture strength.

Since detonation on a given fuel is most noticeable at the maximum knock mixture strength, the observer in the car is automatically compelled to rate each fuel at the maximum knock air-fuel ratio. It is, of course, possible to adjust carburetors to meter to all cylinders at all times a mixture which is richer or leaner than that required for maximum detonation but an engine with such carburetor characteristics is not representative of average passenger car engines.

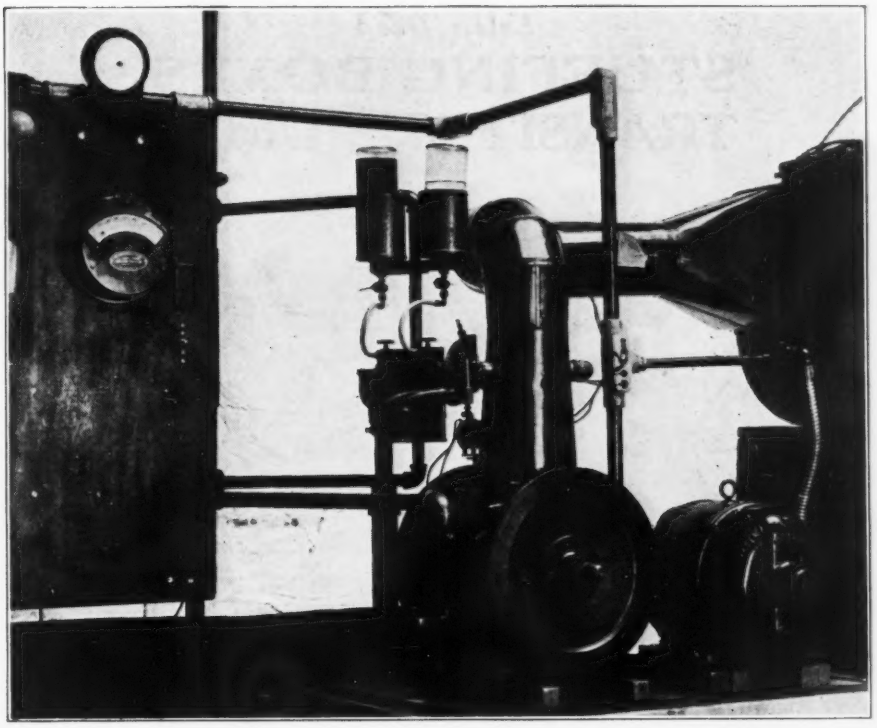


Fig. 3—Air-cooled knock testing engine with provision for varying temperature of cylinder and head

The series of tests described above has not yet been completed but a sufficient number of tests have been made to warrant the following conclusions:

1. The same factors which cause a given laboratory test engine to give variable ratings on a single fuel are also present in automobile engines, hence two fuels which may be equal under one set of conditions in an automobile engine are not necessarily equal under any other conditions.

For example, it is possible to have gasoline containing a given concentration of lead tetraethyl detonate on acceleration up to 15 miles an hour with no detonation on acceleration at higher speeds. It has been found that a benzol blend of the same fuel, containing the minimum percentage of benzol necessary to suppress detonation during acceleration up to 15 miles per hour, detonates badly on acceleration at higher speeds.

With increasing car speed, combustion chamber temperatures increase and lead tetraethyl becomes more effective relative to benzol. Inasmuch as no satisfactory means of measuring detonation in absolute units is now available it can not be said definitely that lead tetraethyl increases or that benzol decreases in anti-knock value, hence we must be content with relative ratings.

In cases of variations of ratings at different speeds, two fuels in this series of tests have been said to be equal when each is at the point of incipient detonation at some speed during acceleration up to 50 miles an hour. It is believed that this evaluation is fair because detonation is objectionable to the average car owner regardless of the speed at which it occurs.

2. Two fuels equal in anti-knock value in one automobile engine under a given set of conditions are not necessarily equal in an engine of different design under the same conditions. Needless to say, the variations in the ratio of combustion chamber surface to combustion chamber volume, differences in cooling, etc. in engines of different types are sufficient to produce as great or greater effects than

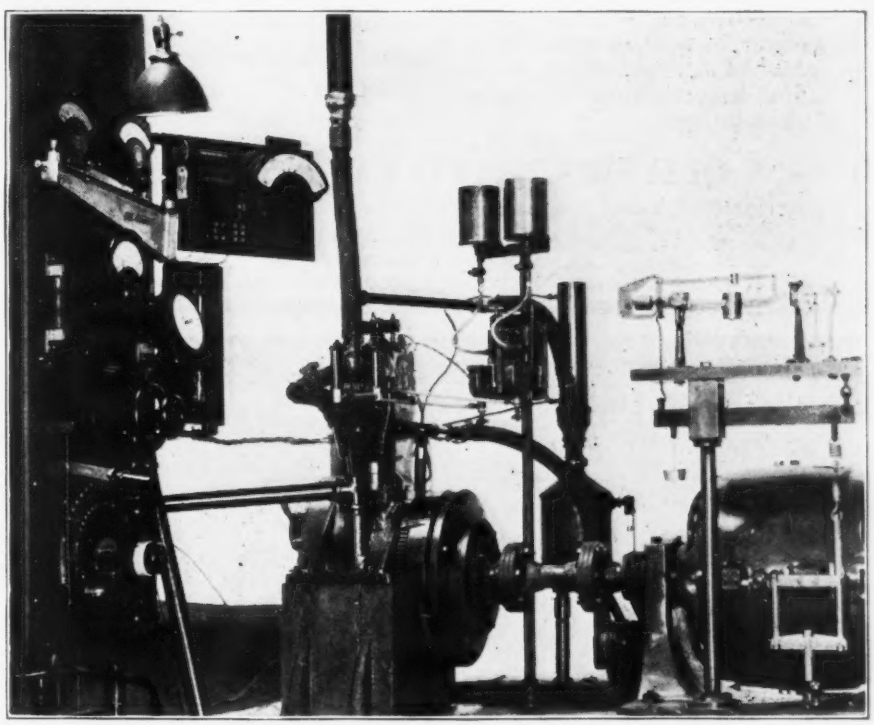
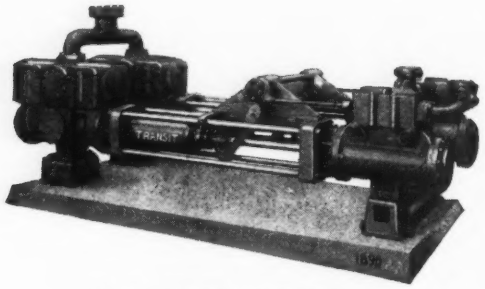


Fig. 4—Large bore liquid-cooled knock testing engine, similar in design to knock testing engine now made and sold by the Ethyl Gasoline Corp.

Extra Deep

STUFFING BOXES
TRANSIT BLOCK VALVE PUMPS



10 x 8 x 18" TRANSIT Horizontal Duplex Block Valve Pump, 210 gallons per minute, at 200 lbs., working pressure.

Pumping hot oil or hot tar is hard on rod packing, and leaky packing means danger of fire and sometimes to life. As a further precaution, each deep stuffing box is also fitted with a lantern gland from which any possible leakage past the packing is piped back to the suction again, without coming in contact with the air.

NATIONAL TRANSIT
Pump and Machine Company
Oil City, Pa.

New York Cleveland Pittsburgh Philadelphia
Los Angeles Tulsa Houston

Study Filtration for Further Application

THE success of filtration in connection with contact work . . . in treating spent doctor solutions . . . in cleaning up residuum suggests further application of filtration.

For co-operation, come to Oliver United whose engineers have developed the already wide application of filtration in the refineries.

OLIVER UNITED FILTERS INC.

SAN FRANCISCO, Fed. Reserve Bank Bldg. NEW YORK, 33 West 42nd St.
CHICAGO, 565 Washington Blvd. SALT LAKE CITY, Felt Bldg.
LOS ANGELES, Central Bldg. LONDON, W. C. 1, 150 Southampton Row
PARIS, 63 Ave. des Champs Elysees.

Factories in U. S. A. *BRANCHES IN FOREIGN COUNTRIES* Cable Address: OLIUNIFILT

VAPOR PHASE REFINING
WILL
Increase your gasoline yields,
Improve your gasoline quality,
and
Reduce your refining costs.

THE GRAY PROCESSES CORPORATION
961-975 Frelinghuysen Avenue
NEWARK, NEW JERSEY

are produced by a change of conditions in a single engine.

3. In view of the behavior of fuels described above, the rating of fuels in automobile engines must of necessity represent a compromise but, fortunately, temperature variations in different designs of automobile engines are not extreme and the relative anti-knock performance of various fuels is not objectionably different in various engines if a proper average rating is obtained.

4. Laboratory test engines of different design may give different ratings on a given fuel under the same conditions of speed, throttle opening, spark advance, and cooling liquid temperature. All engines, however, produce variations in the same direction as the result of a given change of conditions.

FOR example, all engines show an increasing effectiveness of lead tetraethyl with reference to benzol when the temperature of the cooling liquid is increased.

5. Unless a laboratory test engine is of unusual design, conditions may be chosen which cause it to give ratings representative of the average anti-knock performance of fuels in all types of automobile and aviation engines. A large engine may require a low temperature of cooling liquid while a small engine may require a higher temperature.

An engine which operates with an inherently hot combustion chamber may have to be operated at a lower speed than an engine with better combustion chamber cooling but a set of conditions can be chosen on each engine which should bring all engines into agreement on practically all fuels.

6. Once the admission has been made that engine conditions cause a variation in the ratings of fuels, there is no justification for building an engine whose cylinder is a duplicate of an automobile or airplane cylinder, in order to rate fuels properly for use in these two types of engines.

The laboratory test engine, then, becomes a measuring instrument in its physical dimensions may bear little relation to automobile or airplane engines but which, by a proper choice of conditions, gives knock ratings which are representative of the ratings obtained in these engines under their average conditions of operation.

The laboratory test engine should be put in the same class as viscosometers which are instruments of small size bearing little relation to engines but which, on account of standardized dimensions and temperatures, give viscosity ratings which are reproducible in various laboratories and bear a definite relation to the performance of oils in engines.

7. It is extremely fortunate that attempts at standardization of knock

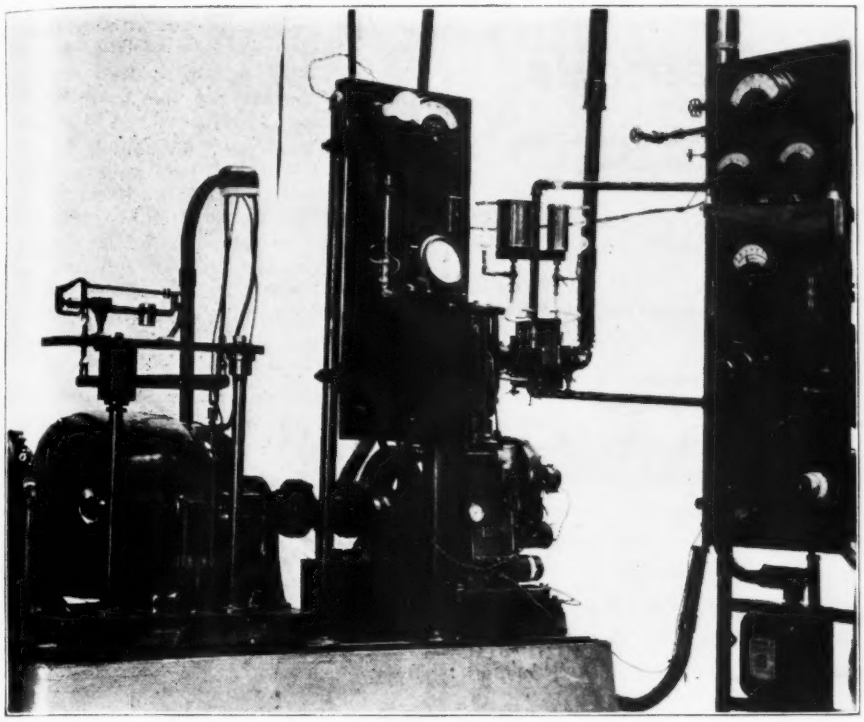


Fig. 5—Variable compression knock testing engine being developed by joint committee of American Petroleum Institute and Society of Automotive Engineers

testing apparatus were not made too soon. Otherwise it is doubtful whether many of the variables which have an influence on rating gasolines would have been discovered yet.

Specifications Of An Ideal Knock Testing Engine

In view of the experiences enumerated above it seems desirable to list the following specifications of an ideal knock testing engine.

1. It should be a universal engine which by a change of conditions is suitable for testing fuels for any type of automobile or airplane engine.

2. Volumetric efficiency should be high to permit the use of as low compression ratio as possible.

3. Due to the somewhat erratic behavior of L-head engines used for knock testing purposes, and to the difficulties encountered in attempting to locate a detonation indicator in an L-head engine, the ideal knock testing engine should be of the valve-in-head type.

4. Cylinder and cylinder head cooling should be as uniform as possible. A uniform temperature is superior to an average temperature of the same degree obtained by having portions of the combustion chamber colder and hotter than the average temperature.

5. The piston should be small to keep the ratio of piston area to circumference at a low figure, and it should be so designed that it operates at as low temperature as possible. Aluminum alloys, by reason of their greater heat conductance, are preferable to iron.

6. Cooling, regardless of the liquid employed, should be by evaporation and the liquid should be circulated if high temperature cooling liquids are to be used.

7. The carburetor should be of the single jet type and provisions should be made for the independent adjustment of fuels for maximum knock.

8. The engine should be so designed that the duration of the unsteady state existing immediately following a change of fuels is reduced to a minimum. Uniform cooling of cylinder and cylinder head and the design of the carburetor to keep the volume of fuel between the jet and fuel-changing valve at a minimum accomplish the desired result.

9. Provision should be made for the maintenance of constant speed which should not exceed 1000 revolutions per minute or preferably 600 revolutions per minute, due to the more consistent operation of knock testing engines at the lower speeds.

10. The displacement should be small to permit the use of a piston of small diameter and the testing of small fuel samples.

11. The crankshaft, connecting rod, and bearings should have ample strength to withstand for long periods of time the shock produced by detonation.

12. Suitable instruments should be provided for indicating engine conditions, especially combustion chamber temperature and intensity of detonation.

13. The machine should be as simple and cheap as possible consistent with durability, accuracy, and reproducibility of ratings.

the standard of the industry...

KEY GRAPHITE PASTE

The country's largest refineries have long known the merits of Key Graphite Paste for sealing hot oil and acid lines. Since it passed the tests of the Underwriter's Laboratories it has been adopted by filling stations and bulk storage plants throughout the country for sealing all oil and gasoline line joints.

Key Graphite Paste is a non-setting, greaseless compound that is not penetrated by the thinnest oil or petroleum product. It prevents corrosion and oxidation, preserves metals, and permits connections to be broken readily when necessary.

MAKE THIS FREE TEST

Make the trial that has convinced the country's largest companies that a saving in labor and profit results from the use of Key Graphite Paste. Put it to the hardest test—then note its astonishing results. Mail the coupon today for a liberal trial supply.

FREE TEST SUPPLY

Listed by National Board of Fire Underwriters

— — — FREE TEST SUPPLY — — —

N. P. N. 10-23-29

Key Boiler Equipment Co.
East St. Louis, Ill.

Send me a free test supply of Key Graphite Paste.

Company.....

Address.....

Requested by.....

New Operating Methods

An average of two articles per issue of National Petroleum News, have discussed new operating methods and solutions to problems facing operators in the oil fields.

What operators are doing to cut costs, new methods and ingenious devices for more efficient work, and other features, are included.

Here are 79 that have appeared since the first of the year for your file reference:

1929

Modern practice of drilling thru big gas formations Oct. 16, p. 55
Methods of tubing high pressure wells Oct. 9, p. 48-F
Exploiting oil bearing structures by unit operation Oct. 9, p. 48-K
Repressuring in depleted oil zones Oct. 9, p. 48-P
Repressuring practice in Mid-Continent Oct. 9, p. 48-B
How ultimate recovery is influenced by delayed development Oct 2, p. 65
Chain driven rig fronts successful Sept. 25, p. 133
Handling salt water disposal problems Sept. 11, p. 67
How Gulf Coast wells are drilled by Rio Bravo Sept. 11, p. 69
Protective pipe line coatings suggested Sept. 11, p. 53
Weighing and counterbalancing aid in efficient pumping Sept. 11, p. 57
Tension is test of transmission power in belting Sept. 4, p. 63
Temporary furnace aids welder in preheating castings Sept. 4, p. 67
Casing weight and strength important in underreaming Aug. 28, p. 68
Decline curves tell when wells should be cleaned Aug. 28, p. 58
Success of repressuring in Burbank discussed Aug. 21, p. 37
Pumping deep crooked wells discussed Aug. 21, p. 38
Valve travel in deep well pumping Aug. 14, p. 59
Sand testers check formation without string of casing Aug. 7, p. 65
Kettleman Hills develops science of deep well drilling July 31, p. 49
Economical operation of small wells July 31, p. 60
Clean-out methods in Tonkawa discussed July 24, p. 32
Warning bell rings when engine stops July 24, p. 61
Filling shot hole with gravel eliminates sand and cavings July 17, p. 69
Comments on Dr. Haseman's well spacing methods July 17, p. 74
Cementing to forestall well troubles July 10, p. 41
Larger oil strings for Kettleman Hills casing July 10, p. 39
Pure water requisite for mixing oil field concrete July 10, p. 58
Economies in small well production July 17, p. 64; July 10, p. 61
Oklahoma City pool has peculiar operating problems July 3, p. 36
Gas lift practice of 15 companies in Seminole une 26, p. 62; June 19, p. 57
Internal combustion engines drive rotary rig June 26, p. 43
Oil/water separator made of old casing June 19, p. 65
Old time bailing plan discarded at Bradford June 19, p. 70
Simplified method of gaging working barrels June 19, p. 40
Clamp lengthens life of oil field belts June 19, p. 66
Back pressure on pumping helpful June 19, p. 49
Oil well shooting practices discussed June 12, p. 40
Straight hole drilling in Seminole June 12, p. 56; June 5, p. 37
No economies in vacuum reduction in Glenn pool June 5, p. 59
Scientific well spacing for over production June 5, p. 63
Bradford water drive speeds as technique improves May 29, p. 50
Oil-water separator devised May 15, p. 68
Vertical holes possible only thru gravity May 15, p. 71
Oil mining in Alsace, Wietze, etc. May 15, p. 72
Formula method for well spacing & rate of production. May 8, p. 59
Automatic water supply for gas lift. May 1, p. 64
Home-made roller bearing stops rod kinking May 1, p. 66
Regulation of "beans" increases output May 1, p. 59
Inert gas as fire protection in concrete reservoirs. Apr. 24, p. 59
Oil field emulsions July 3, p. 53; May15, p. 61 April 17, p. 59 March 27, p. 51
How to keep holes straight April 10, p. 63
Kansas experiments with rotary successful April 3, p. 63
A. P. I. studies crooked holes April 3, p. 29
Wells drilled straight slowly reach sand faster April 3, p. 51
Large savings from low-pressure separation of gas oil March 20, p. 200
Oil well reclaimed with home-made mudding outfit March 20, p. 212
Individual well record keeps leases profitable March 13, p. 59
Alcohol keeps gas lift lines open March 13, p. 66
Perfects method for breaking out air-lift wells March 6, p. 64
Automatic features on lease save money Feb. 20, p. 50
Cheaper lifting, better recovery sought in repressuring Feb. 13, p. 34
Operators to pay $50,000 for water disposal Feb. 13, p 68
Method for surveying hole deviation Feb. 13, p. 59
Cuts expense by removing mud from water Feb. 6, p. 55
Economics of pipe line pumping Feb 6, p. 54
Pulsing air-gas cuts repressuring hazards Jan. 30, p. 60
Engineering makes faster drilling in Seminole Jan. 9, p. 62
Discusses drilling improvements Jan. 9, p. 67
Repressure equipment cost returned quickly by lease Jan. 2, p. 29
Barrel pumps save oil at drilling wells Jan 2, p. 52
Generates own power in Little River Jan. 2, p. 52
Shale carrier removes heavy cuttings from rotary mud Jan. 2, p. 51

Back copies of any of the above issues are 25c a copy. On issues that are exhausted, photostats will be furnished at 40c per page. Libraries in the larger cities generally keep back files of National Petroleum News complete.

National Petroleum News

Main Office: 1213 West Third St. ***Cleveland, Ohio***

The Ethyl Gasoline Corporation, at its four testing laboratories, now employs twelve engines of the present design. Over a long period of time samples checked by the four laboratories have rarely varied in anti-knock rating by more than 0.1 c.c. of lead tetraethyl per gallon, which is a variation of only about 3 per cent. It is believed that this performance is comparable to that of other apparatus used in oil and automotive laboratories. The use of the new machine described should result in even closer agreement among laboratories which use it.

Letters to the Editor

Dear Editor:

In looking over a July number of the NATIONAL PETROLEUM NEWS, I see your editorial—"The So-Called Passing Of The Oil Jobber."

I fully concur with you in that the "Oil Jobber" will always be with us, either "pest" or "beneficiary" of the Petroleum industry. The "Oil Jobber" has been with us since the early sixties, and, like the "passing show" is always "just passing" and is as likely to pass out of the picture as is the production of Petroleum. Some "pass out" for various causes or reasons and others "pass in" for other reasons. However, in the face of all practices or plans, fair or unfair, the Oil Jobber is of sufficient intelligence, energy and ability to maintain himself. The Colorado potato bug appeared on the scene, it is said upward of seventy years ago and the common house fly from a time beyond which the mind of man remembereth not—but, in the face of all efforts to eradicate, these pests or blessings, whichever they may be, are still with us—so is the Oil Jobber.

Many so-called "deep thinkers" with more or less geological knowledge, have been predicting for years that the supply of Petroleum would be exhausted in a relatively short time. These predictions have always been considered more or less pessimistic by other "deep thinkers" who contend that there are sufficient Petroleum deposits in known shales in the United States to supply the world for several hundred years even though the Liquid deposits should become exhausted. And again, it is agreed that from sixty to eighty per cent of Liquid Petroleum remains in the sand or other structures after present known methods of extraction have taken out all possible. This, to say nothing of the deposits that yet remain to be discovered, will assure us of a sufficient supply for several hundred years at least, during all of said period the "Oil Jobber" will be on the job.

E. H. Hilpp, Kentucky Consumers Oil Co., Louisville, Ky.

Gum in Gasoline—How It Performs In the Automobile Engine

By E. B. Hunn,* H. G. M. Fischer* and A. J. Blackwood*

(*Presented at Meeting of S. A. E., Elizabeth, N. J., Oct. 9*)

SIX to eight years ago few people had heard of gum in gasoline. Today, with the universal production of cracked gasoline of the high anti-knock standard demanded by the automotive industry, the refiner has been brought face to face with the gum problem and has been diligently studying practical methods of solving it. He has been handicapped by a general misunderstanding of the true factors involved in gum formation and a lack of adequate testing methods for gum.

The copper dish test has for many years been universally used for determining gum in gasoline. The results of this test are extremely erratic and cannot be relied upon to predict how much gum a given gasoline will deposit in an engine. The inadequacy of this test has been pointed out by others and is shown strikingly by the data presented in the following pages.

Valuable contributions to a better understanding of the chemistry of gum formation, methods of testing for gum, and its effect on engine operation, have been reported by various investigators (See references). From their results and from data collected in our laboratories during the past three years, which agree in substance, the following pertinent conclusions with respect to gum in gasoline have been drawn.

1—Cracked gasoline, as it comes from the stills, is free from actual gum. Usually, however, it contains certain unstable hydrocarbons which will form gum during storage.

2—Gum formation from these unstable constituents in cracked gasoline is essentially an oxidation process, the gum containing a high percentage of combined oxygen. Also, it has been shown conclusively that gum will not be formed in the entire absence of oxygen.

3—The gum formed by oxidation during storage remains dissolved in the gasoline (except in extreme cases). It is the amount of this *dissolved* or *preformed* gum which chiefly concerns us with respect to engine operation. This dissolved gum is sprayed from the carburetor with the gasoline and deposits on the heated portions of the intake manifold and on the intake valves. Imperfect engine operation and loss of power may result either from a partial clogging of the manifold or delayed seating of the intake valves. In severe cases, engine failure may be caused by complete sticking of an inlet valve. No other deleterious effects on the engine except the above have been noted. Only a fraction of the dissolved gum in the gasoline is deposited in the intake system, the percentage of the total depending on the design and operating conditions of the engine. The undeposited gum is carried into the combustion chamber and burned with the charge.

4—The *dissolved* or *preformed gum* is the *only criterion* with respect to the gasoline which determines the amount of deposit that will be formed in intake system. *Unstable constituents* (potential gum) in the gasoline are *not transformed* perceptibly into gum deposits during the passage of the air fuel mixture through the manifold. Hence a *very unstable* gasoline, one that would contain a prohibitive gum content after storage, would give satisfactory engine operation if consumed immediately after manufacture.

5—At present there is no authentic data from which the permissible dissolved gum content for satisfactory engine operation may be defined. Our tests with a Buick car indicated that a 10 milligram gum content per 100 cubic centimeters of gasoline is safe, whereas a 25 milligram gum content gave definite signs of trouble in 5000 miles' operation. Obviously the correct answer to this question depends on reliable data from many more tests on various makes of engines, operating under normal conditions.

6—A gasoline which is to be marketed must be sufficiently stable toward oxidation to contain not more than the permissible dissolved gum at the time of consumption. Since the intervening storage period is very indefinite an adequate safety factor must be allowed, to insure the product being satisfactory to the consumer, even after the most severe oxidizing conditions to which it will be subjected during storage. The many factors affecting gum formation during storage are chiefly of interest to the refiner and will not be considered here.

Significant Gum Tests

From the foregoing it has been shown (1)** (2) that there are only *two gum tests* which are of practical significance for gasoline.

First—A method of determining *dissolved* or *preformed gum* which will indicate whether or not the gasoline is suitable for use in an engine at or near the time of testing.

Second—An accelerated oxidation or stability test which will insure the product being sufficiently stable to remain free from excessive gum during storage.

The copper dish test fulfills neither of these requirements. Copper dish gums are usually higher than dissolved gums (in extreme cases the difference may be a hundredfold), indicating the presence of potential gum. As a stability test or measure of this potential gum the copper dish test is not reliable. Similar conclusions apply to the ordinary *porcelain dish gum test*, which often gives results higher than the dissolved gum.

Dissolved Gum Test

Dissolved or *preformed gum* is determined by evaporating the gasoline under conditions such that no additional gum will be formed during the test. The Bureau of Mines' steam oven test (4) accomplishes this by evaporating in the absence of air, and is in use either as originally proposed, or in modified form by various laboratories.

For the past year a dissolved gum method developed in our laboratories has been found to give results agreeing closely with the Bureau of Mines' method, and in addition, we believe, has certain advantages over the latter as a routine test. The procedure consists in directing a jet of air vertically toward the center of a 100 cubic centimeter sample of gasoline contained in a glazed porcelain dish on a steam bath, using as much air as possible without splashing the gasoline over the rim of the dish. A suitable jet consists of a tube ½ inch inside diameter loosely packed with cotton, the open end being covered by a fine mesh wire screen.

Complete evaporation of a 400 F.

*Standard Oil Development Co.

**Figures refer to citations at end of article.

end point gasoline requires from 12 to 15 minutes. The residue is dried at 100-105 centimeter to constant weight, which requires from 2 to 3 hours for moderate gums. Smaller samples (20 cubic centimeters) and dishes may be used with equally good results, the gum being calculated to milligrams per 100 cubic centimeters.

This method has been checked by replacing the air stream both with nitrogen and carbon dioxide, indicating that there is no perceptible increase in gum due to oxidation by the air. Obviously, the air jet both hastens evaporation and lowers the temperature of the gasoline, thereby preventing the oxidation which may occur during normal evaporation of gasoline from an open porcelain dish.

Accelerated Oxidation Test for Stability

Methods have been described for measuring the stability of gasoline by means of an oxidation test at elevated temperature [1] [2]. For over two years we have been experimenting with similar controlled oxidation tests, which consist of heating the gasoline in a bomb along with air or oxygen for definite periods of time and determining the gum in the oxidized sample.

Our recent modification of such an oxidation test incorporates a recording pressure gauge for following the course of oxidation and resulting gum formation of the sample in the bomb. In performing this test, an open 8 ounce bottle containing the sample is placed in the bomb and the cap of the latter screwed on tight. Next, the small diameter copper tubing leading to the pressure gauge is connected to the bomb by means of a compression coupling.

Oxygen is admitted to the bomb until the gauge reads 100 pounds. The oxygen supply is then cut off and the bomb heated at 212 degrees Fahr. by means of a steam bath. The ensuing pressure-time curve on the chart is a record of the stability of the gasoline.

After immersing the bomb in the heating bath, the pressure rises to a maximum which remains practically constant (in the absence of leaks) until oxidation starts and the gasoline breaks down. This is indicated by a sharp break in the curve and a rapid drop in pressure. The length of time before the breakdown (the so-called induction period) is taken as a measure of the stability of the sample.

Correlation of the above test and ordinary storage has as yet not progressed far enough to state definitely the permissible minimum induction period necessary to insure the product being satisfactory for storage. However, indications are that a gasoline which stands up for 1½ to 2 hours under this test is sufficiently stable for usual storage conditions.

Table No. 1—Delco Engine Test Data

Sample No.	Description	Gum Tests on Copper	Gum Tests on Porcelain	Gum Tests on Sample Diss'd	Total Gum Deposit Mg./100 c.c.	Total Gum Deposit Mg./Gal.
	ENGINE NO. 1					
10	A. K. Naphtha	29	5	5	0.5	20
10A	A. K. Naphtha +2cc. lead	46	15	6	0.4	16
10B	A. K. Naphtha (Blend)	18	6	6	1.6	60
13	California	15	5	3	0.4	16
3	2 pts. No. 10-1 pt. V.P. Gas	212	13	7	1.5	56
5	Vapor Phase (Acid Tr.)	258	19	8	0.3	12
9	Cracked (Untreated)	320	20	14	1.7	64
1	No. 10 + 1% high gum gas	180	17	16	4.4	168
14	No. 10 + 5% V.P. Gas (Raw)	172	19	19	4.9	184
7	No. 10 + Copper Oleate	277	130	19	3.3	124
	ENGINE NO. 2					
8	A. K. Naphtha + 1cc. lead	15	4	3	0.7	28
11	A. K. Naphtha + 1cc. lead	12	3	3	0.8	32
12	V. P. after 2½ months	170	33	8	3.8	144
15	V. P. (blend) after 4 months	17	10	6	3.1	116
6	A. K. Naph. + cu. oleate	240	126	11	5.8	220
1	A. K. Naph. + 1% high gum gas	180	17	16	6.5	248
9A	Cracked Gas (untreated)	365	50	36	8.0	304
4	V. P. Gas (untreated)	243	968	122	20.0	760
16	V. P. Gas (acid tr.)-5 Mo.	493	232	51	1.9	72
17	No. 16 Gas (acid) (Blend)	9	2	1	0.4	*16

*Intake manifold heater off during these runs.

Engine Tests

These include tests on single cylinder Delco engines, a Buick car, and a laboratory apparatus designed by engineers of the Ethyl Gasoline Corp., to imitate the conditions existing in the intake system of an engine.

The object of these tests was to determine more definitely which of the laboratory testing methods is significant with respect to gum deposition in an engine, and to define, if possible, the permissible maximum gum content for satisfactory engine operation.

Delco Tests

Twenty samples were run, representing highly cracked gasolines of good anti-knock value, containing varying amounts of gum.

The engines used were two water-cooled Delcos, each fitted with a special intake manifold, 5 inches long, horizontally placed and electrically heated. A thermocouple at the engine end of the manifold recorded the temperature of the air fuel mixture. Fixed jets were used in the carburetors. The conditions chosen were as follows: gasoline per test, 25 gallons; engine speed, 1200 revolutions per minute; water outlet temperature, 180 degrees Fahr.; mixture temperature, 170 degrees Fahr.; throttle opening, maximum possible with the available loading resistances.

Under the above conditions, it was found that Engine No. 1 required 100 hours per run, whereas Engine No. 2 required 120 to 130 hours, the variation being due to the difference in the available methods of applying the loads. Also, the head of No. 2 was of different construction with a larger water pocket surrounding the intake valve. These differences resulted in heavier gum deposits in Engine No. 2 than in No. 1, making it impossible to compare two gasolines directly unless they both were run on the same engine.

At the completion of each run the engine head and intake valve stem were photographed and the gum and carbon deposits recovered and weighed. Since it was impossible to photograph the interior of the heated intake manifold, where from 70 to 90 per cent of the gum was deposited, the pictures of the valves alone are not conclusive.

The significant results from the 20 runs made on these Delco engines are shown in Table I.

The gum results shown for each sample are the averages of tests by three laboratories for copper, porcelain and dissolved gum. Samples were tested at the beginning of each run and again near the end, in order to make sure that additional gum had not formed during the progress of the engine test.

From these tests it is concluded that:

(1) Copper dish gums are no indication of the amount of gum deposit formed in the engine. Samples such as 3, 5, and 9, with copper dish gums between 200 and 300 gave roughly the same deposit as did samples 10B and 12, both of low copper dish gum content.

(2) Porcelain dish gums, also, do not line up with engine deposits, except where they are the same or very nearly the same as dissolved gum. This indicates that the regular porcelain dish gum is not reliable for predicting engine performance.

(3) Dissolved gums agree roughly

The biggest noise in the industry is actually no noise at all It is the silent, pulls-more performance of Dubbs Cracked Gasoline

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
Owner and Licensor

The
EDELEANU
Process
for
Refining with Liquid SO_2
Yielding
Highest grades of
KEROSENE
TRANSFORMER OIL
TURBINE OILS
LUBE OILS
WHITE OILS
MEDICINAL OILS
Non-Detonating Gasoline
AGEFCI
11 W. 42nd St.
New York N. Y.

Rotary tables cleaned in quick time

OAKITE materials and a large heated tank handle all cleaning for one producer. No hand scrubbing or scraping is necessary. Small repairs and salvage parts are simply soaked free of muck and grease by the basketful. Even rotary tables — or twin drilling engines — are cleaned to the metal in less than two hours. What is more — the Oakite tank runs an amazingly long time with only small additions of material for upkeep.

The Oakite Service Man in your locality—with a wealth of experience in the oil industry—can show you the way to lower cleaning costs. Why not ask him to call. No obligation.

Oakite Service Men, cleaning specialists, are located in leading industrial centers of U. S. and Canada.

Manufactured only by
OAKITE PRODUCTS, INC.
42C Thames St., New York, N. Y.

OAKITE
Industrial Cleaning Materials and Methods

Table No. 2—Ethyl Gasoline Gum Apparatus Data

Run No.	Description of Sample	Gum-Mg./100 c.c. Copper	Porcelain	Diss'd	Deposit on Plate Mg./100 c.c.
2	California Gasoline	14	5	2	2
3	Finished Gasoline No. 1	14	3	3	0.6
4	Finished Gasoline No. 2	25	14	8	5
1	Finished Gasoline No. 3	....	5	4	4
9	Finished Gasoline No. 4	13	5	4	2
5	Colombia—6 mo. storage	131	20	13	9
10	Colombia—4 mo. storage	104	16	10	7
8	Finished Gasoline No. 5	162	86	33	34
6	Vapor Phase—5 months	508	240	49	39
7	No. 6 (Blend)	10	4	2	2
	Plate Temp. 400 F.				

with engine deposition. By comparing these data with the results of other tests which have been reported (1) (2) it is shown that these Delco tests (especially Delco No. 2) gave a greater percentage deposition of dissolved gum than in the other tests mentioned. Hence we believe that these Delco results cannot be used to predict the performance of the same or similar fuels in automobile engines. Their value lies in the correlation we have been able to get between gum deposition and laboratory tests, showing quite conclusively which of the latter is significant.

(4) Carbon deposits seem to bear no relation to the amount of gum in the fuel.

(5) Sticking valves were not common during these tests. Engine No. 1 gave no trouble from this source. Engine No. 2 developed a sticking intake valve on Samples No. 4 and 9A, both with high dissolved gum, which were the only serious cases.

Ethyl Gasoline Corp. Gum Apparatus

These results are included with the engine tests since the apparatus was designed to approximate conditions existing in the intake parts of an engine, where gum is deposited.

Briefly, this apparatus consists of a Holley vaporizer fed by gravity from a 1-quart tank, the air fuel mixture from the vaporizer being drawn by a vacuum pump over an iron plate maintained at a constant temperature. The gum from the mixture deposits on this plate, which is removable for weighing. One quart of fuel is used for each test, the time required being about 1 hour.

From these preliminary results, shown in Table II, the same conclusion is indicated as from the Delco tests, that dissolved gum in the fuel is the only significant figure, and that potential gum is of no importance with respect to the amount of deposit formed. The last two columns of Table 2 show that practically all the dissolved gum in the sample is deposited in this apparatus, as contrasted to a recovery of roughly 10 to 25 per cent when the same fuel is run in a Delco engine.

Buick Test Car Data

Three tests were made with a Buick master-six automobile in order to define more clearly the maximum permissible amount of gum for satisfactory engine operation. The fuels were prepared by blending a high gum gas with a good grade of motor gas to give a 10, a 25, and a 50 milligram dissolved gum content. The significant data are shown in Table 3.

Test No. 7 (10 milligram gum) showed perfect operation throughout the 5000 miles. In Test No. 8 (25 milligram gum) there was perceptible loss of power after 3000 miles with no valve trouble, whereas in Test No. 6 (50 milligram gum) the loss of power was very marked and there was slight trouble from sticking intake valves.

From these data a curve was made, plotting the milligrams of deposit per gallon of fuel used against the dissolved gum value for the fuel. From this curve it is calculated that a fuel containing 15 milligrams gum per 100 cubic centimeters would leave approximately 17 grams of deposit after 10,000 miles' operation of this particular car. This suggests that a 15 milligram dissolved gum is permissible, although further tests on multiple cylinder engines will be made in order to substantiate this tentative conclusion.

Conclusion

As a result of our investigations, and in the light of considerable pub-

(*Continued on Page* 75)

Table No. 3—Buick Test Car Data

Test No.		No. 7	No. 8	No. 6
Gum in Fuel	Dissolved Gum	10 mg.	25 mg.	50 mg.
Gum in Fuel	Copper Dish	....	85 mg.	89 mg.
Miles Operation		5000	5006	2722
Fuel used—gals.		315	332	203
Gum Deposits Recovered				
	From heat riser and manifold	None	19 gms.	50 gms.
	From intake valves and ports	3.6 gms.	9 gms.	60 gms.
	Total	3.6 gms.	28 gms.	110 gms.
	Amt. deposit per gal. fuel used	11 mg.	88 mg.	543 mg.

Good 'Gas' Plus Anti-Knock Rating Theme of Ethyl Campaigns

CLEVELAND

DIFFERENT advertising methods were used by two companies to introduce Ethyl gasoline. These companies are the Standard Oil Co. of New York, marketing in "Soconyland," that mythical advertising land embracing New England and New York state; and the Producers & Refiners Corp. marketing its gasoline from Chicago to the Rocky Mountains.

Methods of the companies in introducing Ethyl gasoline varied widely, but the campaign had a basic mutual foundation. Both companies had advertised widely their gasoline brands prior to taking on Ethyl gasoline. And both companies had to put over a campaign that competed with every other oil company campaign in their territories.

Standard of New York's campaign was backed by executive efforts in the past two summers to sell "Soconyland" as the nation's vacation playground. The 1928 campaign, on a national scale, listed points of historical and scenic beauty; that of 1929 carried messages from the governors in "Soconyland" inviting tourists to their states. Standard Oil submerged its business of selling gasoline and motor oil in the campaigns—the sole purpose being to entice tourists to its territory.

Producers & Refiners Corp. has been advertising its products for the past 11 years in NATIONAL PETROLEUM NEWS. Advertising campaigns also have been carried out in its territory.

First public announcement that Ethyl fluid was being added to Socony Special gasoline was made by the Standard company through one of its weekly radio broadcasts. On the evening of the program full page newspaper advertisements of the "teaser" type were published throughout the territory, telling the public that an announcement of importance to every present or prospective automobile owner or driver would be made during the broadcast. All stations carrying the program were listed with the advertisement.

An informal conversation between a supposed customer and a service station attendant was used in the broadcast to tell the story. The attendant explained that Ethyl fluid was being added to Socony Special gasoline, and what Ethyl is and does for the automobile. The new grade was offered at no advance in price over Socony Special which was a 3 cent premium gasoline.

Follow-up advertisements began the night after the new gasoline was announced on the radio in a "reason why" campaign. The theme was to explain that Socony Special was and is a good, clean burning gasoline and that the Ethyl fluid gave the gasoline a "zero knock rating."

Text of newspaper advertisement merchandising the new Socony Special Ethyl gasoline:

Now for the First Time a Premium Gasoline Plus Ethyl

"The already famous Socony Special now contains Ethyl fluid. You get

OH! FOR PITY SAKES— IT WON'T GO—NOW I AM IN A FIX
CHOKE
BRUTE
JUMP OUT AN' RUN
G-R-R-R-R
POP-BANG
G-R-R-R-R
Two ways for a man to save a lot of trouble
No. 1. By marrying his second wife first
No. 2. By switching to Parco Ethyl Gasoline
While No. 1 is a martial and more or less personal affair, we have no qualms about dropping a hint about No. 2.
PARCO
ETHYL
GASOLINE
When Ethyl joined forces with Parco Gasoline, motor troubles disappeared—or flew the coupe, as it were. Parco Gasoline has always been famed for its surplus power, speed and mileage. And now by adding Ethyl compound, it has attained an Anti-Knock perfection which sets it apart and alone in the motor fuel field.
So perfect, in fact, that it is now a Certified Anti-Knock gasoline with a performance record that challenges comparison. Save yourself a lot of grief by asking for it by name—Parco Ethyl.
PARCO ETHYL GASOLINE Certified ANTI-KNOCK
Look for this sign on the station pumps. It is your surety of a KNOCKLESS motor fuel.
A PRODUCT OF PRODUCERS & REFINERS CORPORATION
For Sale by
DEALERS NAMES HERE
Ad. DE4—9" x 3 Cols.—378 Lines

Humorous type of advertisement used by Producers & Refiners Corp.

Heavy Artillery
WHEN Parco Gasoline primes your motor every spark plug becomes a unit of long-range, high-powered, heavy artillery. Each charge in the compression chamber delivers maximum power to the rear wheels.
PARCO Gasoline
POWER & MILEAGE
... is a pure, crystal clear, gum-free motor fuel. Its full-throated combustion at all temperatures, from initial to end point, gives you more miles per gallon and tremendous power. Therefore, when you "give it the gas" you give it the "big gun" with this supremely good gasoline.
A PRODUCT OF PRODUCERS & REFINERS CORPORATION
For Sale by
DEALERS NAMES HERE
Ad. DP6—9" x 3 Cols.—378 Lines

A striking Parco advertisement

a 'zero knock rating' plus the highest-quality premium gasoline.

"The debate about gasoline is settled. You can prove every statement in this advertisement by the simple method of buying ten gallons of gas and driving your car in and out of traffic, up and down hill.

"A gasoline has been produced so different that you can feel the difference.

"These are the facts.

"We began marketing Socony Special two years ago. It was the finest straight-run gasoline that could be made. Thousands of motorists discovered that it was better and gladly paid the extra cost.

"We have taken this same Socony Special and done the one thing that could be done to make it perfect. We have added Ethyl fluid at extra cost to ourselves but no extra cost to you.

"Ethyl fluid is the only preparation as yet discovered by science that will remove the knock from gasoline. Add enough of it to any gasoline—good or bad—and that gasoline will be knockless. It will, as scientists say, have a 'zero knock rating.'

"A poor gasoline can have a zero knock rating and still be poor gasoline. But when a good, clean, smooth-burning gasoline, such as Socony Special, has a zero knock rating, then you have the most perfect fuel that can be produced.

"Prove what we say. Your car will stand up and shout.

* * *

"Ethyl fluid is the standard anti-knock compound, containing tetra-ethyl lead. It was developed in the General Motors Research Laboratories to meet the needs of the present-day high-compression motors.

"Remember, it is the basic gasoline to which Ethyl fluid is added that determines the ultimate quality of an Ethyl gasoline. The Socony Special which you have been using was a superior high-compression gasoline. With the Ethyl fluid added, this new Socony Special will make old cars run like new cars and will make new cars perform in a way that you have never known before."

The radio was used again in the merchandising campaign. Six 15 minute broadcasts carried the message to women in forenoon programs. The trade received a special issue of "Socony News" on the subject. Twenty-four sheet posters were used for outdoor displays. More than 3300 motor car dealers in the territory received letters explaining that Socony Special gasoline with Ethyl fluid was available through Standard Oil so dealers could recommend an Ethyl gasoline for their new cars, and that

FOLLOWING is the text of a newspaper advertisement by Standard Oil Co. of New York, for a radio broadcast that introduced Ethyl gasoline:

TONIGHT
AT 7:30

A Sensational Announcement Goes on the Air

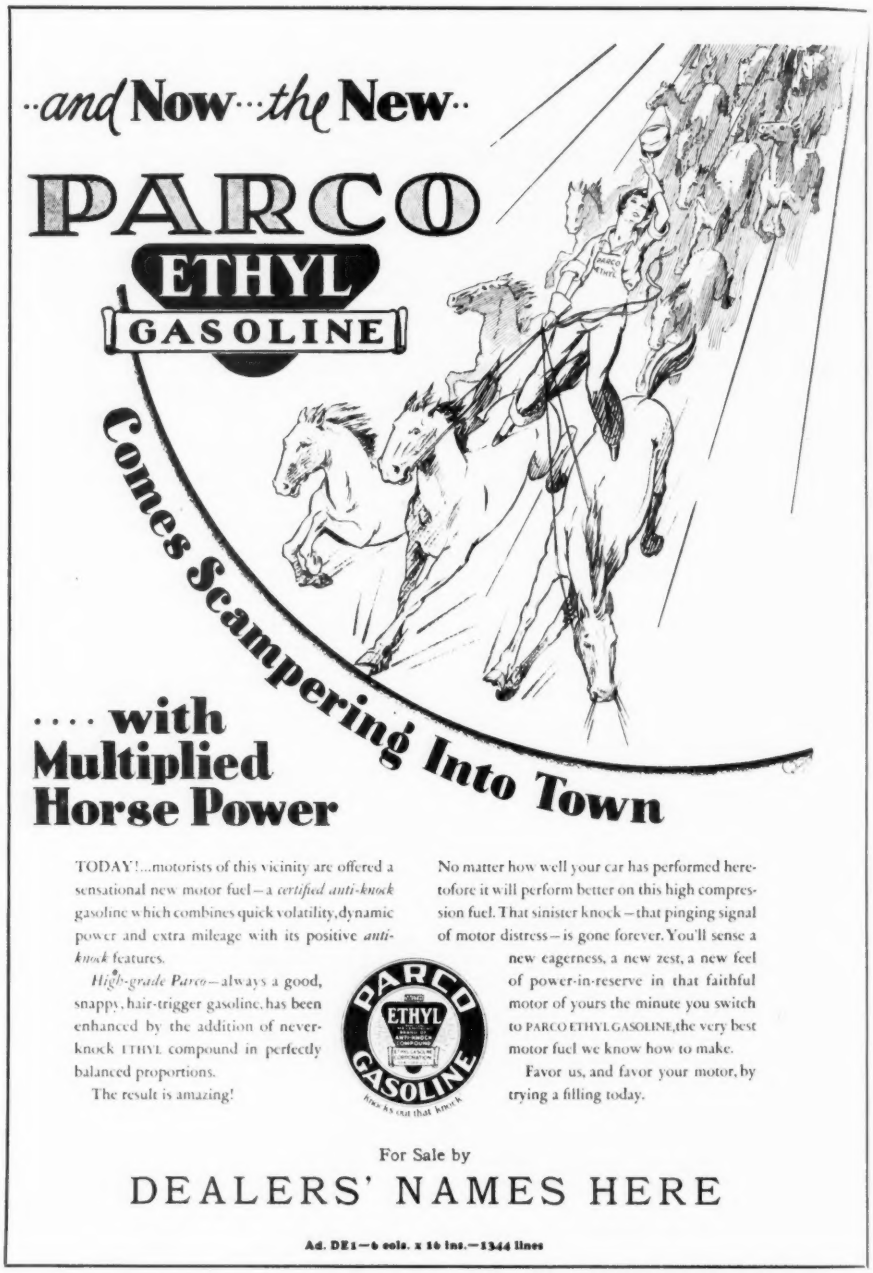
Standard Oil Company of New York to broadcast announcement of vital interest to everyone who owns or drives a car.

Tonight a Soconyland Sketch—the popular radio program of the Standard Oil Company of New York—goes on the air at 7:30.

Just before the main show, comes the most sensational announcement an oil company has made in these parts in years. If you own a car, if you drive a car, even if you are only thinking of owning a car, this announcement affects you. A really great piece of news is in store for you tonight.

You'll enjoy the sketch that follows, too. It is called "The Wayside Stand," and Arther Allen plays the leading role. It's a human, moving story that is sure to provoke your laughter and your sympathy right to the end.

Have your radio dialed at Soconyland Sketches promptly at 7:30 tonight so that you will not miss a single word of this important announcement and the program that follows.


..and Now...the New..
PARCO
ETHYL
GASOLINE
Comes Scampering Into Town
.... with Multiplied Horse Power
TODAY!...motorists of this vicinity are offered a sensational new motor fuel—a *certified anti-knock* gasoline which combines quick volatility, dynamic power and extra mileage with its positive *anti-knock* features.
High-grade Parco—always a good, snappy, hair-trigger gasoline, has been enhanced by the addition of never-knock ETHYL compound in perfectly balanced proportions.
The result is amazing!
No matter how well your car has performed heretofore it will perform better on this high compression fuel. That sinister knock—that pinging signal of motor distress—is gone forever. You'll sense a new eagerness, a new zest, a new feel of power-in-reserve in that faithful motor of yours the minute you switch to PARCO ETHYL GASOLINE, the very best motor fuel we know how to make.
Favor us, and favor your motor, by trying a filling today.
PARCO ETHYL GASOLINE
knocks out that knock
For Sale by
DEALERS' NAMES HERE
Ad. DE1—6 cols. x 16 ins.—1344 lines

An advertisement used to introduce Parco Ethyl gasoline

the gasoline was excellent for use in demonstrating used cars as there would be no knock to hamper the sale.

A humorous theme was used in introducing Parco Ethyl gasoline by the Producers & Refiners Corp., as well as illustrations depicting the power of the motor fuel.

One illustration was a woman, labeled Parco Ethyl, riding a herd of horses into town announcing that "Parco Ethyl gasoline comes scampering the "guns." Another advertisement labeled "Heavy Artillery" depicts a battery of spark plugs, firing end to the enemy, with soldiers shooting the "guns." Another advertisement carried an illustration of a man trying to start his car without any success while his wife is hurling a rolling pin.

The theme of the text, like that for Socony Special Ethyl gasoline, was a good gasoline of "power, speed and mileage" now having anti-knock qualities through the addition of Ethyl fluid.

The text of one advertisement read, "When Ethyl joined forces with Parco gasoline, motor troubles disappeared—or flew the coupe, as it were. Parco gasoline has always been famed for its surplus power, speed and mileage. And now by adding Ethyl compound, it has attained an anti-knock perfection which sets it apart and alone in the motor fuel field."

Another advertisement text read, "Today—motorists of this vicinity are offered a sensational motor fuel—a certified anti-knock gasoline which combines quick volatility, dynamic power and extra mileage with its positive anti-knock features."

ON THE LAZY BENCH

National Petroleum News

A husband found some holes in his silk stockings and said, "Wifey, dear why haven't you mended these?"

"Hubby, darling, did you buy me that opera cloak you promised?"

"N-no."

"Well, if you don't give a wrap, I don't give a darn."

—The Water Tower

* * *

In Paris the other day, an American was arrested as a suspicious character. He had an American passport, American clothes and an American accent, but in the restaurant he had not ordered liquor!

—Field Flashes

* * *

An Englishman was visiting this country for the first time, and as he was driving along the highway, saw a sign "Drive Slow. This Means YOU!"

The Englishman stopped in surprise and exclaimed: "My word! How did they know I was here?"

—Magnolia Oil News

* * *

"So you asked Geraldine to marry you?" asked one man of the other.

"Yes, but I didn't have any luck," replied his friend. "She asked me if I had any prospects."

"Why didn't you tell her about your rich uncle?"

"I did, hang it all! Geraldine's my aunt now."

—Doherty News

* * *

"I've changed my mind."

"Does the new one work any better?"

—Field Flashes

"What's the charge for this battery?"

"Three amperes."

"Well, how much is that in American money?"

—The Water Tower

* * *

Two small boys were out hunting in the woods and one of them stopped and picked up a chestnut burr.

"Tommy!" he called excitedly. "Come here! I've found a porcupine egg!"

—Field Flashes

* * *

"They found poor old Bilikens asphyxiated last night!"

"You don't say!" replied Jinks. "The old fraud! He told me he was a prohibitionist!"

—Magnolia Oil News

* * *

An admiring group surrounded Willie, who had rescued a pal who had broken through the ice.

"That was real bravery, son," said a motherly looking woman.

"Bravery nothing," said Willie. "He had my skates on."

—Doherty News

* * *

A man sued for his overcoat and lost his suit.

—Field Flashes

* * *

Sheik: "Have you heard the English Pants Song?"

Sheba: "No, what is it?"

Sheik: "London Breeches falling down."

—The Water Tower

New Box Type Case

Completely equipped with bottles and jars . . . $15.75

269—A real oil sales case, covered with smooth black cowhide. Lined with red velvet. Case contains fourteen 4-ounce bottles and ten ½-ounce squat grease jars held in position by adjustable bars. Bottles are partitioned separately.

Less 10% for Cash

Other styles in our FREE Catalog

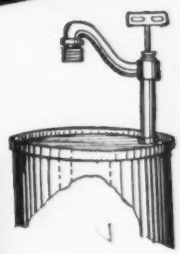
L-U-C-E

Builders of Sales Luggage

614 Delaware, Kansas City, Mo.

You'll Sell More Oil Than Ever Before

Show your "drive-in" customers how they can save money buying in bulk. Sell them by the *drum* instead of by the gallon.



KWART KWICK
Home Oil Pump

Fits any drum or barrel—especially designed for the private user. Lowest-priced fool-proof home oil pump on the market. Works equally well with oil, gas, etc. Strongly built of brass, steel and cast iron—nothing to get out of order. Special quantity discounts to oil companies.

By distributing this pump with bulk sales, you can increase your oil volume 100% to 200%. Others are doing it. Mail coupon today for complete information and prices.

Kwart Kwick Dep't
VIKING PUMP CO.
Cedar Falls, Iowa

MAIL TODAY

Viking Pump Co., Dep't. B
Please send details and prices on your Kwart Kwick Pump.

Name.....

Town.....

State .....

This station sold 200,000 gallons of gasoline in a town of 16,000 population in the first year of business

"Kicks", Salesmanship, Direct Mail Build 200,000 Gallon Business

BATAVIA, N. Y.

ATTENTION to complaints, tactful selling by attendants of all services offered by the station, and direct mail pieces brought the gasoline gallonage of the Ell Park service station here to 200,000 gallons in the first year of operation in a town of 16,000 population.

Gallonage for 1929 will be 400,000 gallons, estimated on the amount of business in the first six months of the year. The station was opened in November 1927, and in 1928 gasoline sold totaled 200,000 gallons.

The station is off but in full view, of the main highway from Buffalo to the east. It is an old church remodelled for car storage and washing, with a canopy in front for the gasoline pumps.

Customers are urged to report any dissatisfaction with the service. Attendants are instructed to report all complaints immediately to the manager. The management in turn follows through on complaints before the customer can become disgruntled.

"A good 'kick' is the best thing in the world for any organization, that is, if that organization takes it and makes the most of the 'kick'," said L. G. Wells, manager of the station. "We learn by our mistakes and the reason we feel we are increasing in efficiency and making more money is because we listen to our public and try to do just what it wants us to do."

Attendants are trained to approach customers with the idea of selling all services afforded by the station. Attempt is made to sell an oil change to a gasoline customer. While the auto is over the pit the attendant tries to sell a complete lubrication job, then a wash job.

Attendants are instructed not to approach the customer with a solicitous attitude. The attendant's salesmanship is to remind the customer what he might need and that the psychological time to service the auto is while it is now in the station.

Eight attendants are employed at the station. Experienced men are sought for the places. Qualifications are intelligence, neat appearance, personality to sell the customers, experience as a chauffeur, and knowledge of greasing and washing an auto. The station is opened 24 hours, working three shifts.

"We get a good percentage of our total business through thoughtful and tactful suggestions," said Mr. Wells. "A simple 'May I check your oil, sir?' accompanied by a smile and a not-too-eager appearance works wonders we find."

Once a month penny post-cards are mailed to all customers—local car owners and tourists—having autos washed or greased at the station. The card reminds the customer of servicing at the station and asks him to return when in need of other services. Names are obtained from the customer when the car is greased or washed. If there is no response after three or four monthly mailings the name is taken off the list.

Tourists are sent cards in the hope they will return the following year and patronize the station. The management believes it will build up a considerable volume of tourist business through the direct mail pieces.

Setting a quota for a station, after a year or two of operation, is believed advisable by the management. On this basis it believes the 1929 gasoline gallonage will be double that of 1928. The quota is for the entire station, not for an individual employee, and is reduced to a daily quota so the personnel knows each day what is expected in sales volume.

One man on each shift is responsible for the lubrication work, and two men for washing. Before a car wash job is turned over to the customer the shift foreman checks the work. The departments are operated on the theory that a poor lubrication, or wash job, will lose customers for all other departments.

While the Ell Park station does

STARS

On the gridiron the star performer is the composite man who kicks, runs and passes the ball with triple skill!

TOKHEIM 660 Visible Gasoline Dispenser Star Performer of the Filling Station Business!

Every line of endeavor has its stars. On the gridiron it is the triple threat man, who kicks, runs, and passes the pigskin with equal skill.

In the gasoline dispensing game the star performer is Tokheim Cut 660--the automatic sensation of the year--that fills, sets and dispenses accurate measure from 1 to 10 gallons, with every operation TRIPLE CHECKED.

Wise oil companies are playing to capacity business by merchandising good gasoline through this finest of visible dispensing equipment.

Get in on the Fall season of profitable business. Make your reservations today. We'll be glad to tell you the enlightening story of how Tokheim's star "salesman" can make whoopee for you.

Tokheim Oil Tank & Pump Co.
Fort Wayne, Indiana

Cut 660 hand operated 10 gallon pump. Electric motor driven, Cut 665

FACTS

SERIES No. 6

What is the perfect Winter Motor Oil?

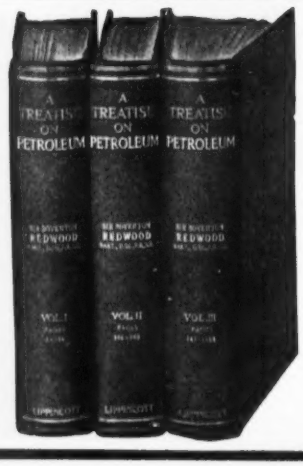
THE secret of a perfect Winter Motor Oil is low viscosity at 100° F. and high viscosity at 210° F. GREEN GOLD SUB-ZERO MOTOR OIL is the only oil you can buy that has this combination together with a 15 to 20° below zero cold test. Try to get any refiner to duplicate these tests:

Gravity	— 26½
Viscosity @ 100	—380
Viscosity @ 210	— 57
Flash	—390
Carbon Residue	— .51

Also made in a heavier grade with a viscosity of 73 to 75 @ 210 and 10° below zero cold test.

Write for samples and exclusive agency proposition.

THE WARREN REFINING & CHEMICAL CO.
Cleveland, Ohio
For twenty-five years a leader in lubricating specialties



Information on all branches of the petroleum industry is to be found in the 4th edition of A TREATISE ON PETROLEUM by Sir Boverton Redwood.

To obtain this valuable set make your check for $30 payable to

NATIONAL PETROLEUM NEWS
1213 W. 3rd St. Cleveland, Ohio

not believe car storage is an intregal part of a service station, it does believe a station should make the most of parking if facilities are available. Last year an average of 60 cars were parked at all times, and six private garages in the rear were filled.

The Ell Park station was built around an old church. The main floor was cleared of fixtures and is used for auto storage. Entrance and exit is on one concrete ramp. In the basement are auto washing facilities, customer's restrooms, and employee rooms. In the middle of each side are the entrances.

At the front of the church, on the ground level, are the offices, and storage rooms for accessories and package goods. A canopy extends from the front over the gasoline pump island. The front of the office has two window displays for accessories and package goods.

The station is visible in the day time several blocks away in each direction. At night about 200 electric lights decorate the canopy so that the station is visible for a greater distance than in the day.

Service Found to be Poor At Average Station

CLEVELAND, Oct. 18.—On a 2000-mile motor trip in five middle western states George S. Allee, president of the Missouri Oil Men's Association, found toilets dirty and service poor at gasoline stations on the highway. He reports in the current association bulletin that he bought small quantities of gasoline on the trip so as to visit a great number of stations.

"We are not pessimistically inclined," Mr. Allee reported "but if the average service rendered us is typical service rendered other tourists, we cannot blame the tourist when he turns his business to the chain stations of the major companies.

"We found toilet facilities as a whole, terrible. This is an important item men, much more so than many of you realize. Clean, well kept toilets influence the purchase of more tourist gasoline than any other single factor. Paper towels and toilet paper each have their place and one does not supplant the other nor does a Montgomery-Ward catalogue answer all purposes.

"We did not have an attendant at a single station, large or small, offer to test our tires on the entire trip. We bought gasoline at four different stations in one day, hoping that some one attendant would suggest that he be permitted to wash the accumulation of grass-hoppers, junebugs, beetles and dust from our wind shield. it was so begrimed toward evening that we asked the last man of whom we purchased gasoline to wash it, which he grudgingly did after a fashion.

"When we study the personnel of

the attendant at the service stations of the jobbers and also the privately owned stations, we wonder if these attendants are not in a good many cases, placed there because they are relatives or friends and not because of their ability as salesmen or good contact men with the public. We found some stations manned by old men who toddled about and with difficulty, worked the pump to refill the containers, others by mere children.

"We rudely awakened one attendant who was soundly sleeping at midday, to sell us a paltry five gallons of gasoline. At another station we temporarily broke up a checker game when we called the attendant out to inquire about the highway, distance etc., and we only succeeded in doing this after he had called to a boy loafing on the outside of the station to "see what that feller wants."

"We 'five-galloned' the entire trip. We occasionally sandwiched in a purchase from different major stations and while the service at many of these major stations was not what it should be, the average is so much better that they are attracting the motoring public, the gasoline buyers of the highways to their stations.

"If the local jobber, popular as he may be in his home territory, is going to compete on the highways with the major companies, whose reputation is national, he cannot afford to handicap his prospects by inefficiency."

Gum in Gasoline

(*Continued from Page 68*)

lished material on the subject, we take this opportunity to recommend that the copper dish gum test be abandoned in writing specifications for gasoline, and two suitable tests, similar to our rapid evaporation test and accelerated aging test, be adopted, and that the whole question of standardization of gum tests be studied by the S.A.E. committee on fuels and lubricants.

We feel that the question of which gum tests are significant has been amply demonstrated and that the most important question still unanswered concerns the permissible maximum gum content for satisfactory engine operation. When the refiner has the answer to that, he will have a target to aim at and can more intelligently work out the correlation between laboratory tests for stability and gum formation during storage.

REFERENCES

1—Vorhees & Eisinger, J. S. A. E., June, 1929.

2—Joint Benzole Research Committee of University of Leeds and National Benzole Association of Great Britain—Fourth, Fifth, and Sixth Annual Reports.

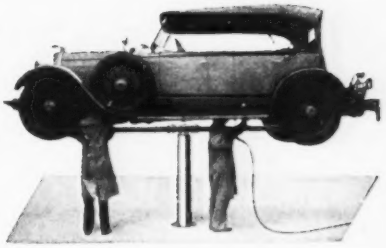
3—Smith & Cooke, Bureau of Mines Serial 2394 (1922).

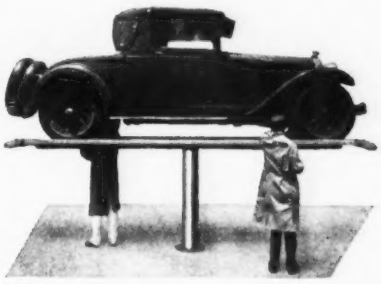
4—Bureau of Mines Serial 2686, (May, 1925).

Only in Rotary Lift can you get Rotary Lift Advantages

Model 94--Free Wheel Type

Low vertical depth. Full working room between car wheels and platform. Wide front axle supports. Differential support that accommodates all cars. Flush type packing gland. Non-adjustable packing. Underwriters' Listing.





Model 96--Drive On Type

14-ft. platform, 12" channel runways with hinged approaches 17" wide. Adjustable drain pan with two support brackets. Two stop chocks. Flush type packing gland. Non-adjustable packing. Underwriters' Listing.

There is built into every Rotary Lift ample strength to handle any car or light truck with a large margin of safety; the durability that gives long life with dependable service; the simplicity in design and construction that insures the lowest operating and maintenance costs; the safety features that modern conditions demand; and the standardization that gives to every user the greatest value that specialization and quantity production can effect.

Write for free copy of new catalog.
No cost or obligation.

Automobile Rotary Lift Company
Memphis, Tenn.

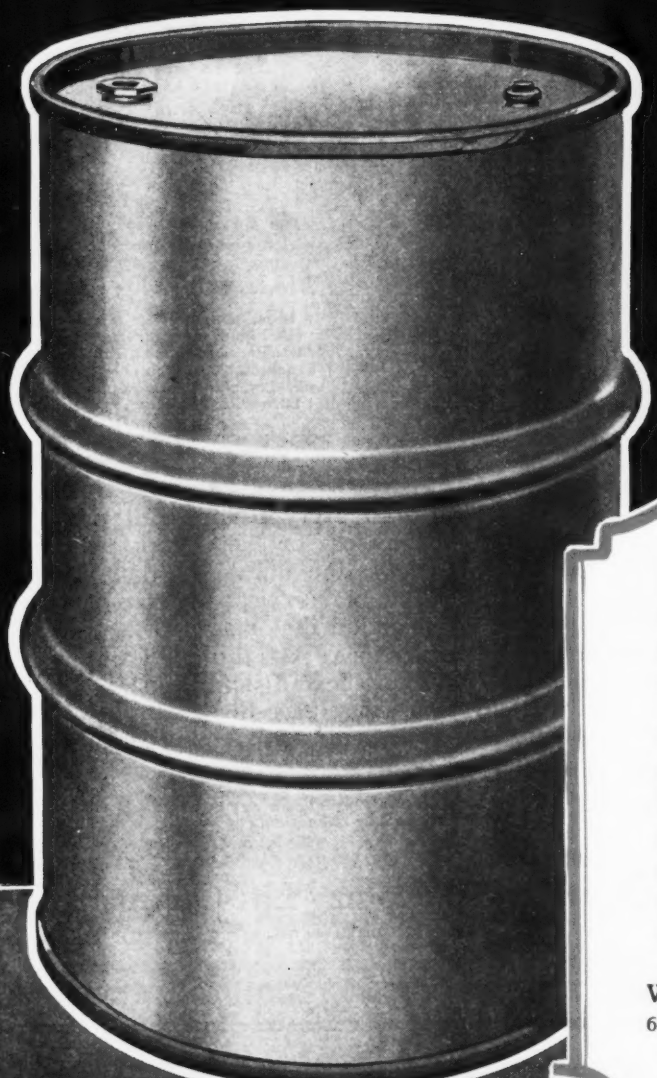
Gasoline And Other Motor Fuels

by Ellis and Meigs, is a book which gives a complete survey of the field and a description of practically every process of making gasoline and most other motor fuels of promise or prominence.

The price of the book is $10. Just send us your check and we will mail a copy of it to you.

National Petroleum News, 1213 W. Third St., Cleveland, Ohio

50,000,000 pounds of *BENETCO* drums



In 1928, 50,000,000 pounds of steel were consumed in the manufacture of BENETCO steel drums.

The constantly increasing demand for WILSON & BENNETT drum craftmanship is a nation's expression of their complete satisfaction with a quarter of a century of service.

WILSON & BENNETT MFG. CO.
6520 S. Menard Ave. CHICAGO
39 Cortlandt St. NEW YORK

Sales Representatives in Principal Cities

"Steel Container Specialists"

Oil Trademarks For Copyright

The following are trademark applications pertinent to our field pending in the United States Patent office which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Barrister Building, Washington, D. C.—trade-mark specialists.

As an additional service feature to its readers, this journal gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering. You may communicate with the Editor of this Department, or send your inquiry direct to the National Trade-Mark Company, stating that you are a reader of this journal.

Ser. No. 286,349—ANOLENE. Warner Stutler Company, Inc., Washington, D. C. For re-refined lubricating oil.

Ser. No. 249,808—RHEEM in a shield-shaped device. Rheem Manufacturing Co., Emeryville, Calif. For steel drums and tanks for shipping and storing oils and greases.

Ser. No. 286,129—ELMAY. Novoduc Corporation, Carlstadt, N. J. For solidified fuel for use in lighters.

Ser. No. 249,036—ARMOULD OIL PRODUCTS. Armould Oil Company, Quincy, Ill. For gasoline, kerosene, and lubricating oils.

Ser. No. 284,502—SPAD. Sunset Petroleum Corporation, Los Angeles, Calif. For petroleum products.

Ser. No. 285,913—FROCO. The Franklin Railway Oil Company, Franklin, Pa. For lubricating oils and greases.

"GEELMA" No. 286,889. George E. Macklem, Chester, Pa. For liquid composition used as a lubricant in cutting pipe threads, etc.

"ALOL" No. 281,929. Allen & Allen, Inc. Providence, R. I. For lubricating oils.

"PENNZOIL" No. 278,014. The Pennzoil Company, Los Angeles, Calif. For fuel oils.

"PHILL-UP WITH PHILLIPS" No. 282,825. Phillips Petroleum Co., Bartlesville, Okla. For gasolines.

"CRYSTALENE" No. 286,588. The Pure Oil Co., Chicago, Ill. For hydro-carbon motor-fuel oils, lubricating oils, lubricating greases and kerosene.

"CISCO" No. 286,621. The Cities Service Oil Co., Cleveland, Ohio. For household lubricating oil.

"Lubraa-Kate" No. 286,689. Lubraa Oil Corp., Brooklyn, N. Y. For lubricating oils.

"Pure As Gold" No. 286,716. The Pop Boys-Manny, Moe & Jack, Philadelphia, Pa. For automobile lubricating oils and cup grease.

"Marvoil" No. 287,466. Joseph G. Goldenberg, Philadelphia, Pa. For oils and greases.

"Big State Oils" No. 287,796. Deepwater Oil Refineries, Inc. Houston, Tex. For illuminating oils, motor fuel oil, lubricating oils and greases.

"Castorex" No. 288,212. W. A. Wood Co., Boston, Mass. For lubricating oils.

"Tailwind" No. 288,299. Independent Oil and Gas Co., Tulsa, Okla. For gasoline and lubricating oils.

"Trust Oil Company, Trustol" No. 263,841. Trust Oil Company, Woodbridge, N. J. For cutting and penetrating oils.

"Collan" No. 268,268. A. B. Collan-Olje-Fabriken, T. Olsen, Stockholm, Sweden. For lubricating oils and greases, cutting oils, fuel oils.

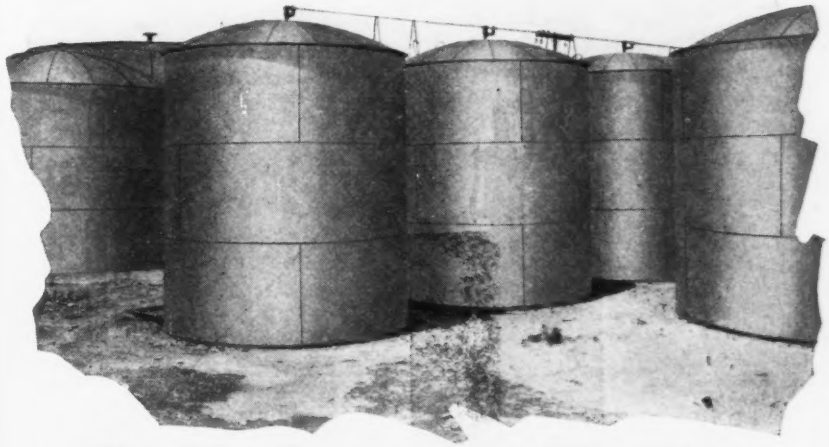
"Gearoleum" No. 269,202. Paragon Oil Co., Inc., Glendale, N. Y. For motor oils and lubricating oils and greases.

"Sparco" No. 277,124. Shreveport Producing & Refining Co., Inc., Shreveport, La. For gasoline, naphtha, gas oil, kerosene, and fuel oil.

"CROWN" No. 283,814. Standard Oil Co., Louisville, Ky. For gasoline.

"LUBROCIDE" No. 285,695. Sterile Products Co., San Diego, Calif. For germicidal lubricating compound for dental and surgical instruments.

25,000-gallon field erected bulk station tanks.



Bulk Storage Tanks

Field erected tanks provide economical storage for all types of bulk stations. Where such stations are installed at central locations primarily to render quick and efficient service, the smaller standard sizes ranging from 25,000 gallons up are used.

If, on the other hand, a marketer desires to take advantage of price variations, considerably more storage is desirable and capacities from a few thousand to 80,000 barrels are installed.

Stop Evaporation

Light oils suffer heavy evaporation losses when handled and stored in ordinary tanks. Such losses can easily be stopped, however, by equipping tanks with Wiggins Roofs.

The Wiggins Floating Roof rides directly on the oil in a tank, eliminating the vapor space. It stops filling losses as well as breathing losses, consequently is best adapted to working tanks which are filled and emptied often.

The Wiggins Breather Roof stops breathing losses on standing storage by taking care of the thermal expansion and contraction in the tank without allowing vapor to escape. While the Breather roof is most effective on standing storage, it will make worthwhile savings on a working tank.

Get our quotations on field erected tanks, completely equipped with the proper type of roof.

CHICAGO BRIDGE & IRON WORKS

Chicago - - - 2125 Old Colony Bldg.
New York - 3145 Hudson Terminal Bldg.
Cleveland - - - 2206 UnionTrust Bldg.
Dallas - - - - - 3339 Magnolia Bldg.
Atlanta - - - - - 1050 Healey Bldg.
San Francisco - - - 1050 Rialto Bldg.

OIL PRICE HANDBOOKS

HAVE you a complete record of REFINERY prices; TANK WAGON markets; EXPORT prices; CRUDE prices—

For quick reference and comparison with today's prices?

The OIL PRICE HANDBOOK is the only complete record of oil markets for a whole year, compiled in one handy volume for quick reference. Cloth bound—marginal index—9" x 6"—146 pages.

Oil Price Handbook for 1928.....$5
" " " for 1927.....$5
" " " for 1926.....$5
" " " for 1925 } $6
" " " for 1924 }

Send for these OIL PRICE HANDBOOKS *now*, before they are all gone.

National Petroleum News, 735 Penton Bldg., Cleveland, Ohio

GREATER PROFITS

6560-S
OIL

100
GREASE

6040
KEROSENE

Maximum profit accruing from the sale of lubricating oil, kerosene and grease can be realized only through clean, quick and safe dispensing with up-to-date equipment.

Wayne-Marvel lubricating outfits are available in eleven models and types and kerosene outfits are made in five models.

Greasing equipment includes three models having ½ pound discharge; also ½ and 1 pound grease pumps and various types of trucks.

Barrel pumps for lubricating oil are one quart stroke while kerosene and gasoline transfer pumps have one gallon stroke and are furnished with either shut-off nozzle or hose.

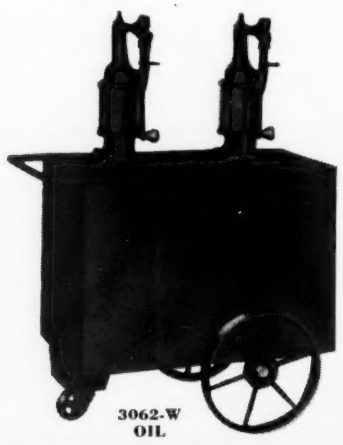
Wayne transmission and differential Flusher is an exceptional source of profit both through its cleaning operation and subsequent sale of new grease.

Send for literature and prices.

100
OIL

FLUSHER

307
GREASE



3062-W
OIL

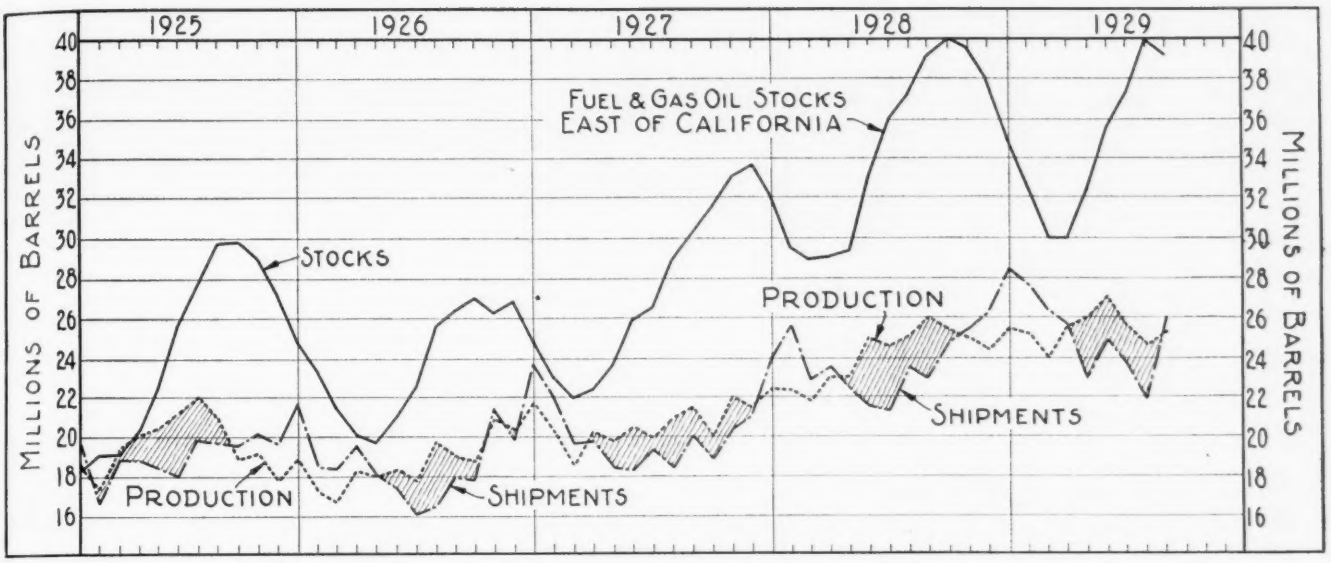
WAYNE COMPANY

FORT WAYNE ~ INDIANA

Atlantic Area
FRY EQUIPMENT CORP. DIVISION
Rochester, Pennsylvania

WAYNE COMPANY, LTD.,
Toronto, Canada

Pacific Area
THE BOYLE-DAYTON DIVISION
Los Angeles, California



Gas and Fuel Oil Barometer

Record Demand for Fuel Oil in August Causes Off-Season Stock Cut

By J. C. Chatfield
V. P. N. STAFF WRITER

CLEVELAND, Oct. 19

FOR the first time in many years, stocks of fuel and gas oil at refineries east of California were reduced in August according to reports of the U. S. Bureau of Mines.

With industry throughout the nation running in high gear, demand for heavy oils for fuel purposes rose in August to nearly the levels reached during the period of peak consumption last winter.

Shipments of fuel and gas oil from plants east of California in August totaled 26,165,000 barrels. This was an increase of 13 per cent over last year, when shipments were 23,145,000 barrels.

This downward trend of stocks of heavy oils in the off season indicates a more healthy condition for the refining industry. Profits for the past two years have been affected materially by the fuel oil surplus. Oil fuel prices have been kept at a low level since the surplus has had to compete with coal for an outlet.

If industry continues to prosper and heavy oil inventories decline during the fall, as well as in the normal winter period, the outlook for heavy oils in 1930 should be improved.

The August withdrawal from storage is surprising also when it is considered that imports of fuel oil this year have been far in excess of those in recent years. Imports in August totaled 2,589,000 barrels, as compared with 515,000 barrels in August, 1928.

Exports for the month totaled 3,579,000 barrels, which was only a slight increase over the total of 3,420,000 barrels in August 1928.

Last year the first reduction in heavy oil stocks came in October.

Gas and Fuel Oil Situation by Districts — Barrels

Districts	August 1929 Daily Avg. Output	July 1929 Daily Avg. Output	August Change %	August Daily Avg. Shipments	July Daily Avg. Shipments	August Change %	Stocks August 1929	Stocks July 1929	Stocks August 1928	Districts
Gulf Coast Texas..	155,935	149,323	+ 4.43	162,387	145,806	+11.37	9,282,000	9,482,000	10,391,000	Gulf Coast Texas
Gulf Coast Louis...	40,742	39,710	+ 2.60	50,839	38,452	+32.21	4,734,000	5,047,000	4,495,000	Gulf Coast Louis.
Total Gulf.....	196,677	189,033	+ 4.04	213,226	184,258	+15.72	14,016,000	14,529,000	14,886,000	Total Gulf
East Coast.....	240,097	231,806	+ 3.57	238,839	178,226	+34.01	8,706,000	8,667,000	8,773,000	East Coast
California.....	438,871	430,903	+ 1.85	.....	.....	.....	.....	.....	.....	California
Total Coastal....	875,645	851,742	+ 2.81	*452,065	*362,484	+24.71	22,722,000	23,196,000	23,659,000	Total Coastal
Appalachian.....	16,645	19,129	—12.98	17,710	15,451	+14.62	1,045,000	1,078,000	1,111,000	Appalachian
Ind., Ill., Ky., etc...	107,806	101,290	+ 6.43	104,419	85,226	+22.52	3,397,000	3,292,000	3,441,000	Ind., Ill., Ky., etc.
Okla., Kans., Mo...	112,484	105,774	+ 6.34	131,226	106,064	+23.72	5,574,000	6,155,000	6,581,000	Okla., Kans., Mo.
Inland Texas.....	83,129	88,452	— 6.02	76,290	78,871	— 3.27	3,868,000	3,656,000	2,733,000	Inland Texas
N. La. and Ark.....	40,323	39,000	+ 3.39	43,419	41,355	+ 4.99	1,267,000	1,363,000	827,000	N. La. and Ark.
Rocky Mountain...	22,387	19,774	+13.21	18,903	16,323	+15.81	1,443,000	1,335,000	1,409,000	Rocky Mountain
Total Inland....	382,774	373,419	+ 2.51	391,967	343,290	+14.18	16,594,000	16,879,000	16,102,000	Total Inland
TOTAL U. S.....	1,258,419	1,225,161	+ 2.71	*844,032	*705,774	+19.58	39,316,000	40,075,000	39,761,000	TOTAL U. S.
Imports.....	83,516	71,161	+17.35	.....	.....	.....	.....	.....	.....	Imports
Exports.....	.....	.....	.....	115,452	113,903	+ 1.36	.....	.....	.....	Exports
Avg. new supply...	1,341,935	1,296,322	+ 3.51	.....	.....	.....	.....	.....	.....	Avg. new supply
Avg. ship. to dom. distributors or users	.....	.....	.....	*728,580	*591,871	+23.10	.....	.....	.....	Avg. ship. to dom. distributors or users

*Exclusive of California.

Gas and Fuel Oil Supply and Demand — Barrels

	Production	Imports	Exports	Domestic Shipments	*Stocks End of Month
January, 1928	33,013,000	553,000	4,175,000	.....	30,665,000
February	31,897,000	666,000	3,420,000	.....	29,560,000
March	34,437,000	848,000	3,969,000	.....	29,104,000
April	33,870,000	1,176,000	4,211,000	.....	29,669,000
May	35,620,000	784,000	3,612,000	.....	32,887,000
June	35,765,000	468,000	4,238,000	.....	36,085,000
July	36,754,000	484,000	4,261,000	.....	36,410,000
August	37,390,000	515,000	3,420,000	.....	39,236,000
Total Eight Months	278,746,000	5,494,000	31,306,000	.....	39,236,000
September	37,004,000	397,000	3,226,000	.....	39,900,000
October	36,941,000	320,000	3,356,000	.....	39,599,000
November	35,771,000	411,000	3,320,000	.....	37,878,000
December	37,293,000	646,000	3,254,000	.....	34,926,000
1928 Total	425,755,000	7,268,000	44,462,000	.....	34,926,000
January, 1929	36,838,000	335,000	3,699,000	.....	32,522,000
February	34,331,000	466,000	2,795,000	.....	30,118,000
March	37,456,000	1,146,000	2,600,000	.....	30,195,000
April	37,533,000	1,778,000	2,892,000	.....	33,404,000
May	38,570,000	1,983,000	3,100,000	.....	35,636,000
June	37,338,000	1,660,000	3,375,000	.....	37,332,000
July	37,980,000	2,206,000	3,531,000	.....	40,075,000
August	39,011,000	2,589,000	3,579,000	.....	39,316,000
Total Eight Months	299,067,000	12,163,000	25,571,000	.....	39,316,000
Change This Year Over Like Period Last Year	+20,321,000	+6,669,000	—5,735,000	.....	+80,000
Per Cent	+7.29	+121.39	—18.32	.....	+0.20

*East of California only.

Crude Oil Imports — Barrels

Origin	August Daily Av.	July Daily Av.	Jan.-Aug. 1929 Total	Jan.-Aug. 1928 Total	Per cent Change 1929 over 1928
Mexico	46,600	39,800	8,596,000	11,513,000	—25.34
Venezuela	97,300	128,200	36,851,000	30,358,000	+21.39
Colombia	29,500	25,500	8,068,000	8,442,000	— 4.43
Other Countries	13,700	4,000	2,259,000	1,897,000	+19.08
Total	187,100	197,500	55,774,000	52,210,000	+ 6.83

Crude Oil Exports — Barrels

Destination	August Daily Av.	July Daily Av.	Jan.-Aug. 1929 Total	Jan.-Aug. 1928 Total	Per cent Change 1929 over 1928
Canada	62,000	92,600	14,160,000	9,899,000	+43.04
Other Countries	10,100	7,900	2,681,000	2,325,000	+15.31
Shipments	.....	.....	7,000	.....	.....
Total	72,100	100,500	16,848,000	12,224,000	+37.83

In 1927 the first reduction was in December and in both 1925 and 1926 the first reduction came in October, at the beginning of the heating season.

Normally fuel and gas oil stocks decline sharply from October to March and then increase until the end of September. This year stocks dropped in January and February, while in March demand was almost exactly equal to production. The four succeeding months saw stocks rising sharply as usual, the total increase for the four months approximating 10,000,000 barrels east of California.

In 1928 stocks increased slightly in March and continued piling up for seven months before fall demand began to cut in on reserves. The increase in the seven months of last year was approximately 11,000,000 barrels. In 1927 the high point in stocks was nearly 12,000,000 barrels above the low for the year.

As a general rule fuel and gas oil stocks continue to drop after the first pull is made on storage in the fall. In 1926 there was an exception when stocks rose slightly in November, after being reduced in October.

This year indications are that demand for heavy oils has been a little above production in September. While it is still some time before the government report will be out showing September operations, it is now possible to get a close line on the national situation weekly through the reports of the American Petroleum Institute covering about 95 per cent of the active refining capacity of the country.

The A.P.I. weekly reports during September have indicated a small draft on gas and fuel oil stocks east of California and a small increase on the Pacific coast. The weekly reports have shown a cut of a little less than a half million barrels from Aug. 31 to Sept. 28, east of California.

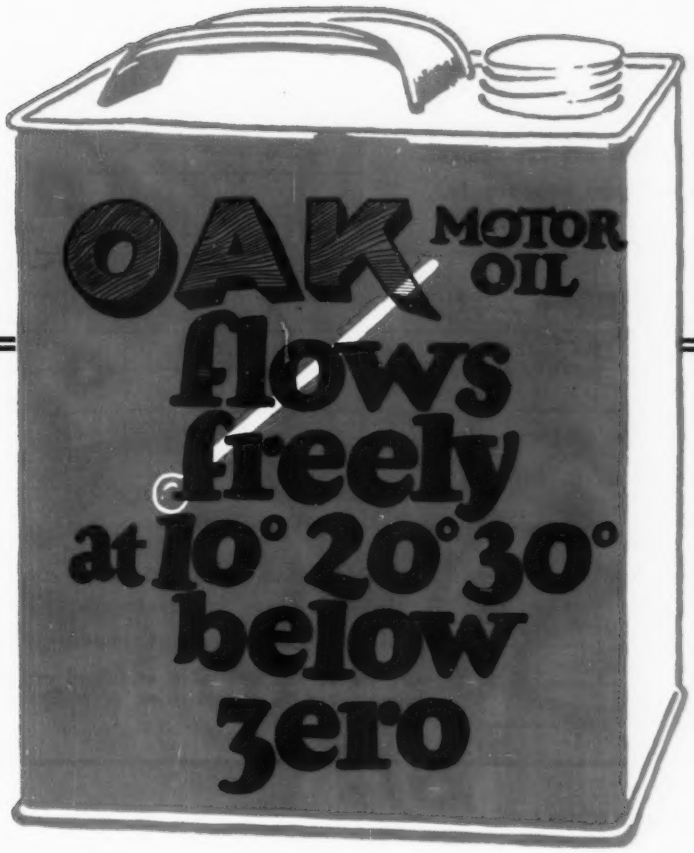
A favorable aspect of the gas and fuel oil situation this year is that stocks have not risen much beyond the peak of 1928, assuming that the peak has passed. Total stocks on July 31 were 40,075,000 barrels east of California. Last year peak stocks were 39,900,000 barrels on Sept. 30.

With a constantly growing demand for most products and a more or less chronic overproduction it is usual in our industry that stocks rise to new high levels year after year. An exception to this was in 1926, when the peak of fuel oil stocks was about 3,000,000 barrels below the 1925 peak.

Total stocks of fuel and gas oil east of California Aug. 31, as shown by the government report, were 39,316,000 barrels as compared with a total of 39,236,000 barrels on the same date last year. This is an in-

Runs to Stills — Barrels — Daily Average

Districts	CRUDE OIL August 1929	CRUDE OIL July 1929	UNFINISHED OIL August 1929	UNFINISHED OIL July 1929	NATURAL GASOLINE August 1929	NATURAL GASOLINE July 1929	TOTAL INPUT August 1929	TOTAL INPUT July 1929
Texas Gulf Coast: Domestic	393,484	406,677	23,484	15,065	19,387	16,806	436,355	438,548
Foreign	10,903	7,064	.....	.....	.....	.....	10,903	7,064
Louisiana Gulf Coast: Domestic	119,355	113,581	4,806	774	13,968	13,032	138,129	127,387
Foreign	11,742	10,903	.....	.....	.....	.....	11,742	10,903
Total Gulf Coast	535,484	538,225	28,290	15,839	33,355	29,838	597,129	583,902
East Coast: Domestic	311,484	269,548	38,419	37,839	7,548	2,935	357,451	310,323
Foreign	180,258	188,903	.....	.....	.....	.....	180,258	188,903
Total East Coast	491,742	458,451	38,419	37,839	7,548	2,935	537,709	499,226
California	710,774	729,129	36,548	17,226	57,774	54,677	805,096	801,032
Total Tide Water	1,738,000	1,725,805	103,257	70,904	98,677	87,450	1,939,934	1,884,160
Appalachian	89,258	95,161	5,613	4,516	1,484	1,548	96,355	101,225
Ind., Ill., Ky	334,000	317,161	28,129	25,258	6,774	7,032	368,903	349,451
Total East Central	423,258	412,322	33,742	29,774	8,258	8,580	465,258	450,676
Oklahoma, Kans., Mo.	332,839	325,258	16,129	14,452	13,774	12,839	362,742	352,549
Inland Texas	164,774	170,161	5,194	4,355	6,677	5,097	176,645	179,613
No. La. and Ark	66,290	63,323	10,742	10,548	4,710	4,581	81,742	78,452
Total Southwestern	563,903	558,742	32,065	29,355	25,161	22,517	621,129	610,614
Rocky Mountain	72,677	74,710	22,452	17,548	4,194	4,194	99,323	96,452
Total Inland	1,059,838	1,045,774	88,259	76,677	37,613	35,291	1,185,710	1,157,742
TOTAL UNITED STATES	2,797,838	2,771,579	191,516	147,581	136,290	122,741	3,125,644	3,041,902



The Season's best seller— will boost your profits, too!

Now — uncertain weather—cool and cold — prevails.

And now, motorists want the oil that is fluid at all temperatures. You want it too, for you know that the use of it, and the sale of it, will result in satisfaction to all concerned.

For eight years, Oak Motor Oil has been acknowledged the leader of winter oils. It has given summer results—easy starting, quick acceleration, pep, power, pick-up and instant and constant lubrication to cylinders, bearings, wrist-pins and valve stems — irrespective of climatic conditions, or type of service.

Oak dealers tell us that Oak doubles their oil profits in winter. And that it boosts their sales volume, through additional sales of gasoline and accessories. You want these extra profits.

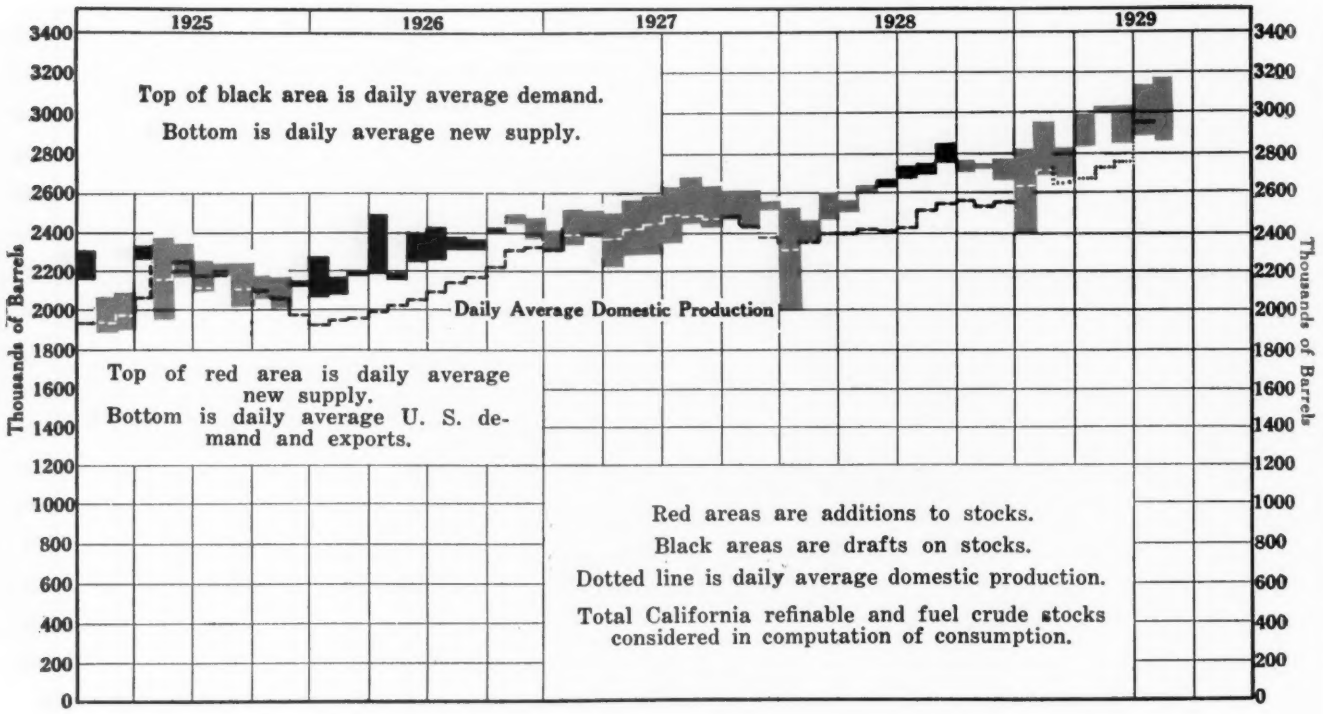
Get an oak franchise now for the big selling season is here—now. Keep up your sales volume with Oak as a leader. Order a drum for testing purposes. Or order a tank car, for a nice profit. There's still exclusive territory for established distributors. Reserve yours now.

FRONTIER MANUFACTURING COMPANY, Dept. 25, NORTH TONAWANDA, N. Y.

Manufacturers of Oak Motor Oils and Greases

OAK MOTOR OIL

Crude Oil Production and Demand



August domestic production	2,977,000 Bbls. daily average	Stock at refineries east of California, Aug. 31, 1929	46,998,000 Bbls.
August imports	187,100 Bbls. daily average	Stocks in pipe lines and at tank farms east of California	339,513,000 Bbls.
Total new supply	3,164,100 Bbls. daily average	Stocks of light California crude	37,685,000 Bbls.
August total indicated demand east of California	2,127,700 Bbls. daily average	Stocks of heavy California crude	108,362,000 Bbls.
August indicated demand in California	664,200 Bbls. daily average	Stocks of foreign crude not at refineries	166,000 Bbls.
August exports	72,100 Bbls. daily average	*Total stocks of crude	532,724,000 Bbls.
Total indicated demand	2,864,000 Bbls. daily average	Increase in stocks in August	9,305,000 Bbls.
		Stocks Aug. 31, 1928	482,074 Bbls.

*Exclusive of stocks held by producers which amounted to 6,702,000 barrels.

crease of only 80,000 barrels or 0.2 per cent in the 12 months.

Total demand for heavy oils outside of California in the first eight months of the year was 199,401,000 barrels as compared with 185,851,000 barrels in the same period in 1928. This is an increase in demand of 7.3 per cent.

Production in the eight-months period was only about 4,000,000 barrels above demand, the total being 203,791,000 barrels. Last year the production in the first eight months was 191,065,000 barrels or 5,000,000 barrels more than shipments. The increase in production this year over last has been 6.7 per cent.

Industrial consumption of fuel oil should continue at a good rate during the winter months, according to the views of most observers of business conditions. Railroad operations are particularly good. In the west the carriers still are moving part of the grain crop.

For the last week of October car

Petroleum Supply and Demand — Barrels

	August 1929	July 1929	June 1929	May 1929	April 1929	August 1928	Jan.-Aug. 1929	Jan.-Aug. 1928
Domestic Crude Production: Light	83,407,000	82,878,000	75,390,000	76,009,000	71,799,000	69,959,000	605,751,000	525,877,000
Heavy	8,881,000	8,449,000	8,013,000	8,406,000	8,311,000	7,848,000	65,979,000	63,746,000
Imports of crude oil	5,800,000	6,122,000	6,591,000	7,552,000	7,828,000	6,141,000	55,774,000	52,210,000
Imports of refined oil	3,429,000	3,176,000	2,426,000	2,732,000	2,634,000	1,007,000	17,678,000	8,697,000
Natural gasoline produced	4,507,000	4,417,000	4,250,000	4,343,000	4,264,000	3,438,000	33,824,000	27,409,000
Benzol used in blending	264,000	264,000	257,000	267,000	255,000	233,000	2,054,000	1,841,000
Total new supply of all oils	106,288,000	105,306,000	96,927,000	99,309,000	95,091,000	88,626,000	781,060,000	679,780,000
Total stocks end of preceding month	666,962,000	660,425,000	653,529,000	649,803,000	643,530,000	612,052,000	613,483,000	589,607,000
Total supply of all oils	773,250,000	765,731,000	750,456,000	749,112,000	738,621,000	700,678,000	1,394,543,000	1,269,387,000
Exports of crude oil	2,236,000	3,117,000	2,615,000	1,932,000	1,726,000	1,883,000	16,848,000	12,225,000
Exports of refined oil	12,621,000	12,358,000	12,383,000	10,928,000	10,357,000	10,810,000	90,668,000	93,186,000
Domestic demand, crude and refined	86,327,000	83,294,000	76,425,000	82,723,000	76,735,000	78,819,000	614,682,000	555,184,000
Total demand	101,184,000	98,769,000	91,423,000	95,583,000	88,818,000	91,512,000	722,198,000	660,595,000
Total stocks of all oils end of month	672,066,000	666,962,000	660,425,000	653,529,000	649,803,000	616,328,000	672,066,000	616,328,000
Days' supply	205.9	209.3	216.7	211.1	218.4	208.7	226.1	227.6
Increase in stocks of all oils	5,104,000	6,537,000	5,504,000	3,726,000	6,273,000	†2,886,000	58,862,000	19,185,000
Daily average new supply	3,429,000	3,397,000	3,231,000	3,204,000	3,170,000	2,859,000	3,214,000	2,786,000
Daily average demand	3,264,000	3,186,000	3,047,000	3,083,000	2,961,000	2,952,000	2,972,000	2,707,000
Daily average excess of supply over domestic demand	346,000	410,000	382,000	204,000	263,000	85,000	382,000	261,000
Crude stocks east of Calif.: Light	.....	.....	333,102,000	332,011,000	331,301,000	.....	.....	.....
Heavy	**386,677,000	**383,343,000	45,987,000	47,531,000	49,405,000	**375,567,000	**386,677,000	**375,567,000
In California: Light	.....	.....	32,667,000	29,038,000	26,500,000	.....	.....	.....
Heavy	**146,047,000	**140,076,000	103,660,000	101,681,000	100,332,000	**113,367,000	**146,047,000	**113,367,000
Total stocks of crude	532,724,000	523,419,000	515,416,000	510,261,000	507,538,000	488,934,000	532,724,000	488,934,000
Total stocks of refined	138,449,000	142,387,000	143,653,000	141,878,000	141,099,000	126,980,000	138,449,000	126,980,000
Total stocks of natural gasoline	893,000	1,156,000	1,356,000	1,390,000	1,166,000	414,000	893,000	414,000

**Light and heavy crude listed together. †Decrease.

PRODUCING REFINING TRANSPORTING MARKETING

CUSHING Quality

gives you the winning move

Wire, Write or Phone for quotations

58-60 U.S. Motor Gasoline
64-66-375 E. P. Aviation
41-43 W. W. Kerosene
38-40 Straw Distillate
32-36 Gas Oil Uncracked
22-25 Fuel Oil
(Cushing or Blackwell)

Cushing Quality makes extra profits for distributors who depend on Cushing for the finest in Petroleum Products. Because Cushing Quality builds customers confidence in you, the kind of confidence that brings them back for more, making the cash register ring often . . . where it formerly rang but . . . once.

A good Trade Mark to tie up with

CUSHING REFINING & GASOLINE CO.

REFINERIES CUSHING & BLACKWELL OKLAHOMA

Crude Oil Production by States and Fields—Barrels

	August 1929 Daily Avg.	July 1929 Daily Avg.	August 1928 Daily Avg.	Jan.-Aug. 1929 Total	Jan.-Aug. 1928 Total	1929 Change Over 1928
California	878,500	864,400	627,300	196,015,000	152,148,000	+28.83
Gulf Coast Louisiana	19,200	18,300	25,000	4,711,000	4,635,000	+ 1.60
Gulf Coast Texas	135,000	127,000	106,000	30,490,000	26,174,000	+16.49
Total Gulf Coast	154,200	145,300	131,000	35,201,000	30,809,000	+14.26
Total Coastal	1,032,700	1,009,700	758,300	231,216,000	182,957,000	+26.38
Colorado	6,100	6,900	7,700	1,631,000	1,896,000	—13.97
Montana	8,500	8,500	10,900	2,186,000	2,705,000	—19.19
New Mexico	4,700	3,500	2,700	746,000	595,000	+25.38
Wyoming	56,900	54,200	61,200	12,670,000	14,339,000	—11.64
Total Rocky Mountain	76,200	73,100	82,500	17,233,000	*19,540,000	—11.81
Arkansas	66,300	67,700	88,800	17,471,000	21,749,000	—19.67
Kansas	135,000	139,600	102,500	28,329,000	26,816,000	+ 5.64
Oklahoma	730,100	731,700	691,000	172,418,000	158,399,000	+ 8.85
North Louisiana	34,600	35,100	39,300	8,415,000	10,253,000	—17.93
Inland Texas	761,300	745,900	633,000	166,425,000	142,734,000	+16.60
Total Southwestern	1,727,300	1,720,000	1,554,600	393,058,000	359,951,000	+ 9.20
Illinois	18,400	18,000	18,500	4,212,000	4,376,000	— 3.75
Indiana	2,600	2,500	3,100	655,000	679,000	— 3.53
Ohio	18,600	20,900	19,700	4,497,000	4,818,000	— 6.66
Kentucky	21,900	22,900	21,300	4,808,000	4,900,000	— 1.88
Pennsylvania	33,600	33,400	27,700	7,562,000	6,590,000	+14.75
West Virginia	15,400	15,600	15,900	3,704,000	3,833,000	— 3.37
New York	9,200	9,700	7,200	2,196,000	1,619,000	+35.64
Michigan	21,000	20,100	1,500	2,574,000	325,000	+692.00
Tennessee	100	100	300	15,000	35,000	—57.14
Total Eastern	140,800	143,200	115,200	30,223,000	27,175,000	+11.22
GRAND TOTAL U. S.	2,977,000	2,946,000	2,510,600	671,730,000	589,623,000	+13.93

*Includes 5,000 barrels for Alaska and Utah.

Stocks of Crude Oil

Domestic Unless Otherwise Specified. Amounts in Thousands of Barrels at Refineries

	Aug., 1929	July, 1929	Aug., 1928
East Coast:			
Domestic	9,221	9,292	9,154
Foreign	4,370	4,910	4,946
Appalachian	2,697	2,723	2,258
Indiana, Illinois, etc.	2,834	3,119	2,891
Oklahoma, Kans., etc.	6,475	6,271	5,208
Texas Inland	1,716	1,753	1,926
Texas Gulf Coast:			
Domestic	10,461	10,512	7,814
Foreign	372	397	54
Ark. and Inland La.	1,468	1,511	882
Louisiana Gulf Coast:			
Domestic	4,104	4,160	4,690
Foreign	1,469	1,530	1,049
Rocky Mountain	1,811	1,933	1,545
U. S. East of Calif.	46,998	48,111	42,417
AT TANK FARMS, IN PIPE LINES AND ELSEWHERE THAN REFINERIES (Reported by Field of Origin)			
Appalachian	4,578	4,551	5,657
Kentucky	806	834	1,040
Lima-Indiana	637	732	1,348
Ill., S. W. Indiana	10,598	10,615	11,909
Okla., Kansa., Tex., except coastal	255,199	250,403	235,597
N. La.-Ark.	22,856	23,074	26,176
Gulf Coast	20,374	20,473	17,813
Rocky Mountain	24,465	24,328	26,665
East of Calif., pipe line and tank farm stocks	339,513	335,010	326,205
Foreign Crude:			
Atlantic ports	67	85	23
Gulf ports	99	137	62
Total refinery, pipe line and tank farm stocks east of Calif.	386,677	383,343	368,707
California:			
20° and lighter	37,685	34,430	18,310
Heavier than 20°	108,362	105,646	95,057
GRAND TOTAL	532,724	523,419	482,074
CLASSIFICATION BY GRAVITY (East of California)			
24° and lighter	344,701	339,438	317,538
Heavier than 24°	41,976	43,905	51,169
PRODUCERS' STOCKS (Approximate)			
East of Calif.	6,450	6,550	6,860
California	252	194	*

*Not available.

loadings of revenue freight totaled 1,160,210 cars. This was a new high for the year. It was an increase of 43,499 cars over the same week a year ago and 42,850 cars over the same week in 1927.

Prospects for the steel industry's fall business are good after the August lull from the July record. Railroads are reported in the market for new rails and rolling stock particularly.

Automobile manufacturers are entering a season of low production which will have some retarding effect on industry. Dealers stocks have been climbing to such an extent that automobile plants are on low schedules or being shut down.

Gasoline

It is not news in our industry that a new record for production and consumption of gasoline was set in August. That is the normal condition. It would be news if a new record were not made.

Production of gasoline during the month averaged 1,242,259 barrels per day, as compared with 1,221,129 barrels per day in July, an increase of 1.73 per cent. Shipments averaged 1,374,257 barrels per day, as compared with 1,353,742 barrels per day in July, an increase of 1.52 per cent.

As a whole coastal districts did less gasoline business in August than in July. This was due to a drop in shipments of 9.84 per cent from East coast plants and a fall of 2.54 per cent in California gasoline shipments. Gulf coast plants increased their deliveries 6.99 per cent.

Inland refineries as a whole increased their gasoline shipments 4.14 per cent. Appalachian and north Louisiana and Arkansas districts reported a drop in gasoline sales, while all others showed gains.

Two districts in the country were overproducing gasoline to such an extent in August that they added to storage in the peak of the consuming season. California, which is producing half again as much motor fuel as it did last year added approximately 500,000 gallons to storage in the month bringing total stocks in that

Gasoline Situation by Districts — Barrels

Districts	August 1929 Daily Avg. Output	July 1929 Daily Avg. Output	August Change %	August Daily Avg. Shipments	July Daily Avg. Shipments	August Change %	Stocks August 1929	Stocks July 1929	Stocks August 1928	Districts
Gulf Coast Texas	192,323	189,419	+ 1.53	224,548	209,613	+ 7.12	2,907,000	3,906,000	4,217,000	Gulf Coast Texas
Gulf Coast Louis.	61,387	58,065	+ 5.72	70,806	66,452	+ 6.55	1,447,000	1,739,000	912,000	Gulf Coast Louis.
Total Gulf	253,710	247,484	+ 2.52	295,354	276,065	+ 6.99	4,354,000	5,645,000	5,129,000	Total Gulf
East Coast	161,323	146,871	+ 9.84	176,774	194,161	— 9.84	4,382,000	4,861,000	4,300,000	East Coast
California	277,968	284,484	— 2.29	262,064	268,903	— 2.54	12,876,000	12,383,000	9,794,000	California
Total Coastal	693,001	678,839	+ 2.09	734,192	739,129	— 0.67	21,612,000	22,889,000	19,223,000	Total Coastal
Appalachian	41,742	44,419	— 6.03	49,613	51,581	— 3.82	1,056,000	1,300,000	742,000	Appalachian
Ind., Ill., Ky., etc.	196,677	188,935	+ 4.10	225,226	218,645	+ 3.01	4,780,000	5,665,000	3,483,000	Ind., Ill., Ky., etc.
Total East Cent.	238,419	233,354	+ 2.17	274,839	270,226	+ 1.71	5,836,000	6,965,000	4,225,000	Total East Cent.
Okla., Kans., Mo.	179,000	179,161	— 0.09	213,806	207,194	+ 3.19	3,257,000	4,336,000	1,855,000	Okla., Kans., Mo.
Inland Texas	61,710	61,323	+ 0.63	65,968	61,871	+ 6.62	957,000	1,089,000	603,000	Inland Texas
No. La. and Ark.	23,452	23,323	— 0.55	22,452	24,516	— 8.42	314,000	283,000	94,000	No. La. and Ark.
Total Southwest.	264,162	263,807	+ 0.13	302,226	293,581	+ 2.94	4,528,000	5,708,000	2,552,000	Total Southwest.
Rocky Mountain	46,677	45,129	+ 3.43	63,000	50,806	+24.00	1,812,000	2,318,000	1,197,000	Rocky Mountain
Total Inland	549,258	542,290	+ 1.28	640,065	614,613	+ 4.14	12,176,000	14,991,000	7,974,000	Total Inland
TOTAL U. S.	1,242,259	1,221,129	+ 1.73	1,374,257	1,353,742	+ 1.52	33,788,000	37,880,000	27,197,000	TOTAL U. S.
Imports	25,548	30,129	—15.20	.....	.....	.....	.....	.....	.....	Imports
Exports	.....	.....	.....	181,774	194,839	— 6.71	.....	.....	.....	Exports
Average new supply	1,267,807	1,251,258	+ 1.32	.....	.....	.....	.....	.....	.....	Avg. new supply
Avg. ship. to dom. distrib. or users	.....	.....	.....	1,192,483	1,158,903	+ 2.90	.....	.....	.....	Avg. ship. to dom. distributors or users

Natural Gasoline and Motor Blends — Barrels

Districts	Daily Avg. Production August (net)	Daily Avg. Production July (net)	Stocks End of August	Stocks End of July	Motor Fuel Blends Made in August	Motor Fuel Blends Made in July	Stocks Blends End of August	Stocks Blends End of July	Districts
Appalachian	4,389	4,532	58,429	76,238	4,929	4,714	5,476	6,214	Appalachian
Ill., Ky., etc.	691	691	4,524	5,357	48	48	238	262	Ill., Ky., etc.
Seminole, etc.	23,733	23,810	79,929	82,667	28,333	21,738	3,786	3,286	Seminole, etc.
Osage County	5,376	5,069	187,143	227,714	48	2,190	48	95	Osage County
Rest of State	15,054	15,361	149,071	171,238	63,690	74,667	9,595	10,952	Rest of State
Total Oklahoma	44,163	44,240	416,143	481,619	92,071	98,595	13,429	14,333	Total Oklahoma
Kansas	1,920	1,920	15,381	28,548	952	810	167	143	Kansas
Panhandle	12,135	10,369	221,667	321,143	12,214	11,000	500	1,262	Panhandle
North Texas	2,842	2,995	16,024	29,238	1,857	4,429	881	1,095	North Texas
West Central	9,370	9,293	86,357	133,881	5,571	5,167	1,190	1,452	West Central
Rest of State	2,764	2,842	6,786	6,357	1,500	1,571	357	357	Rest of State
Total Texas	27,111	25,499	330,834	490,619	21,142	22,167	2,928	4,166	Total Texas
Louisiana	3,917	3,763	15,190	19,523	810	643	238	262	Louisiana
Arkansas	2,151	2,074	6,405	6,048	11,881	12,548	262	500	Arkansas
Rocky Mountain	3,226	3,072	12,500	13,048	.....	.....	.....	.....	Rocky Mountain
Long Beach	15,515	15,745	.....	.....	.....	.....	.....	.....	Long Beach
Ventura Ave.	5,376	5,146	.....	.....	.....	.....	.....	.....	Ventura Ave.
Seal Beach	2,995	2,995	.....	.....	.....	.....	.....	.....	Seal Beach
Huntington Beach	2,765	2,688	.....	.....	.....	.....	.....	.....	Huntington Beach
Santa Fe Springs	17,972	17,435	.....	.....	.....	.....	.....	.....	Santa Fe Springs
Rest of California	12,750	12,673	.....	.....	.....	.....	.....	.....	Rest of California
Total California	57,373	56,682	34,024	34,786	.....	.....	.....	.....	Total California
Total U. S.	145,391	142,473	893,430	1,155,786	131,833	139,525	22,738	25,880	Total U. S.

field to 12,876,000 barrels, more than a third of the total refinery reserves of the nation.

North Louisiana and Arkansas refiners suffered a loss of 8.42 per cent in gasoline shipments in August as compared with July. At the same time refiners in that group reduced production only 0.55 per cent. The result was that stocks increased 31,000 barrels, or nearly 11 per cent, to 314,000 barrels. This group of manufacturers always keeps its stocks of motor fuels at a low point. Seldom do stocks represent much more than two weeks' supply.

The government report for August gave no hint of a drop in the amount of gasoline which our industry may expect to sell this year. In the first eight months total domestic shipments were 14.4 per cent greater than in the same period last year. This compares with 14.6 per cent increase for the first seven months.

Gasoline Supply and Demand — Barrels

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January, 1928	27,981,000	562,000	3,713,000	20,778,000	37,368,000
February	26,856,000	372,000	3,341,000	21,402,000	39,853,000
March	29,276,000	259,000	4,016,000	24,294,000	41,078,000
April	29,317,000	472,000	4,111,000	25,567,000	41,189,000
May	30,825,000	368,000	5,812,000	28,346,000	38,224,000
June	30,703,000	212,000	4,808,000	29,469,000	34,862,000
July	32,974,000	267,000	5,167,000	32,542,000	30,394,000
August	34,101,000	479,000	4,563,000	33,336,000	27,075,000
Total Eight Months	242,033,000	2,991,000	35,531,000	215,734,000	27,075,000
September	33,669,000	193,000	4,837,000	29,722,000	26,378,000
October	34,403,000	388,000	4,049,000	30,680,000	26,440,000
November	33,171,000	304,000	4,678,000	26,052,000	29,185,000
December	33,907,000	420,000	3,802,000	26,644,000	33,066,000
1928 Total	377,183,000	4,296,000	52,897,000	328,832,000	33,066,000
January, 1929	34,335,000	499,000	4,650,000	22,602,000	40,648,000
February	31,264,000	406,000	3,838,000	22,776,000	45,704,000
March	34,467,000	327,000	4,798,000	27,495,000	48,205,000
April	34,636,000	822,000	4,629,000	32,019,000	47,015,000
May	36,270,000	729,000	5,249,000	34,117,000	44,648,000
June	35,606,000	732,000	5,832,000	*33,163,000	*41,991,000
July	37,855,000	934,000	6,040,000	36,860,000	37,880,000
August	38,510,000	792,000	5,635,000	37,759,000	33,788,000
Total Eight Months	282,943,000	5,241,000	40,671,000	246,791,000	33,788,000
Change This Year Over Like Period Last Year	+40,910,000	+2,250,000	+5,140,000	+31,057,000	+6,713,000
Per Cent	+16.90	+75.23	+14.47	+14.40	+24.79

*Revised.

Total refinery shipments were 13.8 per cent greater than last year in the first eight months. This compares with an increase of 13.6 per cent in shipments in the first seven months over the first seven months of 1928.

August saw a tendency in certain refining districts to slow up on the overproduction of gasoline. This was particularly true at Inland Texas plants. In the first six months of the year Inland Texas refineries produced

Kerosene Situation by Districts — Barrels

Districts	August 1929 Daily Avg. Output	July 1929 Daily Avg. Output	August Change %	August Daily Avg. Shipments	July Daily Avg. Shipments	August Change %	Stocks August 1929	Stocks July 1929	Stocks August 1928	Districts
Gulf Coast Texas	24,097	22,355	+ 7.79	27,516	19,903	+38.25	1,378,000	1,484,000	1,541,000	Gulf Coast Texas
Gulf Coast Louis.	13,677	10,710	+27.70	17,839	6,323	+182.13	702,000	831,000	1,429,000	Gulf Coast Louis.
Total Gulf	37,774	33,065	+14.24	45,355	26,226	+72.94	2,080,000	2,315,000	2,970,000	Total Gulf
East Coast	24,452	21,000	+16.44	19,903	22,387	—11.10	1,431,000	1,290,000	1,417,000	East Coast
California	31,419	19,935	+57.61	30,581	18,258	+67.49	2,911,000	2,885,000	2,040,000	California
Total Coastal	93,645	74,000	+26.54	95,839	66,871	+43.32	6,422,000	6,490,000	6,427,000	Total Coastal
Appalachian	10,419	10,097	+ 3.19	12,258	8,935	+37.19	258,000	315,000	317,000	Appalachian
Ind., Ill., Ky., etc.	15,935	14,839	+ 7.39	12,516	11,000	+13.78	973,000	867,000	1,279,000	Ind., Ill., Ky., etc.
Total East Cent.	26,354	24,936	+ 5.69	24,774	19,935	+24.27	1,231,000	1,182,000	1,596,000	Total East Cent.
Okla., Kans., Mo.	28,968	27,645	+ 4.79	32,645	27,871	+17.13	568,000	682,000	557,000	Okla., Kans., Mo.
Inland Texas	8,097	8,839	— 8.39	8,290	7,871	+ 5.32	158,000	164,000	85,000	Inland Texas
No. La. and Ark.	1,677	1,516	+10.62	1,613	1,452	+11.09	21,000	19,000	24,000	No. La. and Ark.
Total Southwest.	38,742	38,000	+ 1.95	42,548	37,194	+14.39	747,000	865,000	666,000	Total Southwest.
Rocky Mountain	6,129	5,194	+18.00	5,194	3,645	+42.50	289,000	260,000	233,000	Rocky Mountain
Total Inland	71,225	68,130	+ 4.54	72,516	60,774	+19.32	2,267,000	2,307,000	2,495,000	Total Inland
TOTAL U. S.	164,870	142,130	+15.99	168,355	127,645	+31.89	8,689,000	8,797,000	8,922,000	TOTAL U. S.
Imports	774	484	+59.92	.....	.....	.....	.....	.....	.....	Imports
Exports	.....	.....	.....	66,258	41,548	+59.47	.....	.....	.....	Exports
Average new supply	165,644	142,614	+16.15	.....	.....	.....	.....	.....	.....	Avg. new supply
Avg. ship. to dom. distrib. or users	.....	.....	.....	102,097	86,097	+18.58	.....	.....	.....	Avg. ship. to dom. distributors or users

33.9 per cent more gasoline than in the first half of 1928.

In July gasoline production exceeded that of July 1928 by 12.6 per cent and in August the increase in production was only 3.3 per cent. This brought the total increase for eight months down to 25.9 per cent. A slowing down in West Texas resulting from competition and higher crude prices has been partly responsible for this.

In August four refining districts appeared to be overproducing gasoline, assuming that a normal production would be an increase of about 14 per cent over August of last year. Indiana-Illinois refiners increased their production 16.3 per cent over August last year. Inland Louisiana and Arkansas increased production 30.3 per cent. Gulf coast Louisiana increased production 17.0 per cent and California increased production 49.1 per cent over August 1928.

Kerosene

Demand for kerosene increased seasonally in August with the result that shipments increased 18.58 per cent over July to 102,097 barrels per day. The upturn in demand caused refiners to change their cuts and increase production 16.15 per cent over July to 165,644 barrels per day. Stocks were cut 108,000 barrels to 8,689,000 barrels.

In the year to date refiners have produced 37,331,000 barrels of kerosene, a reduction of 2,699,000 barrels or 6.74 per cent from the first eight months of 1928. Exports in the first eight months have dropped 1,229,000 barrels or 8.25 per cent while domestic shipments have increased 129,000 barrels or 0.54 per cent.

Kerosene Supply and Demand — Barrels

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January, 1928	5,058,000	46,000	2,350,000	2,799,000	7,670,000
February	4,749,000	11,000	1,551,000	3,266,000	7,613,000
March	4,715,000	6,000	1,852,000	2,722,000	7,760,000
April	5,033,000	20,000	1,912,000	3,168,000	7,733,000
May	5,243,000	1,000	2,057,000	3,383,000	7,537,000
June	4,849,000	24,000	1,655,000	2,323,000	8,432,000
July	4,994,000	19,000	1,834,000	3,141,000	8,470,000
August	5,389,000	2,000	1,678,000	3,296,000	8,887,000
Total Eight Months	40,030,000	129,000	14,889,000	24,098,000	8,887,000
September	5,060,000	.....	2,090,000	3,264,000	8,593,000
October	5,190,000	55,000	1,755,000	3,469,000	8,614,000
November	4,908,000	.....	2,091,000	2,545,000	8,886,000
December	4,968,000	20,000	1,241,000	3,632,000	9,001,000
1928 Total	60,156,000	204,000	22,066,000	38,008,000	9,001,000
January, 1929	4,700,000	38,000	1,918,000	2,956,000	8,865,000
February	4,435,000	20,000	1,591,000	3,519,000	8,210,000
March	4,515,000	5,000	1,899,000	2,976,000	7,855,000
April	4,434,000	21,000	1,657,000	3,156,000	7,497,000
May	4,902,000	6,000	1,463,000	3,200,000	7,742,000
June	4,928,000	15,000	1,790,000	2,547,000	8,348,000
July	4,406,000	15,000	1,288,000	2,684,000	8,797,000
August	5,111,000	24,000	2,054,000	3,189,000	8,689,000
Total Eight Months	37,331,000	144,000	13,660,000	24,227,000	8,689,000
Change This Year Over Like Period Last Year	—2,699,000	+15,000	—1,229,000	+129,000	—198,000
Per Cent	—6.74	+11.63	—8.25	+0.54	—2.23

Lubricating Oils

Refiners kept their production of lubricating oils in line with demand during the month. Shipments averaged 102,871 barrels per day, and production was 101,386 barrels per day.

Lubricant Situation by Districts — Barrels

Districts	August 1929 Daily Avg. Output	July 1929 Daily Avg. Output	August Change %	August Daily Avg. Shipments	July Daily Avg. Shipments	August Change %	Stocks August 1929	Stocks July 1929	Stocks August 1928	Districts
Gulf Coast Texas	21,903	21,677	+ 1.04	23,290	22,774	+ 2.27	1,821,000	1,864,000	1,532,000	Gulf Coast Texas
Gulf Coast Louis.	2,290	1,935	+18.35	2,645	2,645	.....	74,000	85,000	113,000	Gulf Coast Louis.
Total Gulf	24,193	23,612	+ 2.46	25,935	25,419	+ 2.03	1,895,000	1,949,000	1,645,000	Total Gulf
East Coast	33,452	28,710	+16.52	31,871	36,452	—12.56	2,332,000	2,283,000	2,585,000	East Coast
California	6,903	6,323	+ 9.17	7,613	5,161	+47.51	862,000	884,000	894,000	California
Total Coastal	64,548	58,645	+10.07	65,419	67,032	— 2.41	5,089,000	5,116,000	5,124,000	Total Coastal
Appalachian	15,419	14,903	+ 3.46	15,613	16,806	— 7.10	1,150,000	1,156,000	1,196,000	Appalachian
Ind., Ill., Ky., etc.	10,839	10,613	+ 2.13	9,710	10,871	—10.68	653,000	618,000	742,000	Ind., Ill., Ky., etc.
Okla., Kans., Mo.	7,387	7,613	— 2.97	8,806	8,065	+ 9.19	382,000	426,000	449,000	Okla., Kans., Mo.
Inland Texas	871	710	+22.68	1,194	839	+42.31	31,000	41,000	80,000	Inland Texas
N. La. and Ark.	516	484	+ 6.61	516	452	+14.16	7,000	7,000	1,000	N. La. and Ark.
Rocky Mountain	1,806	1,742	+ 3.67	1,613	1,774	— 9.08	166,000	160,000	119,000	Rocky Mountain
Total Inland	36,838	36,065	+ 2.14	37,452	38,807	— 3.49	2,389,000	2,408,000	2,587,000	Total Inland
TOTAL U. S.	101,386	94,710	+ 7.05	102,871	105,839	— 2.80	7,478,000	7,524,000	7,711,000	TOTAL U. S.
Imports	161	129	+24.80	.....	.....	.....	.....	.....	.....	Imports
Exports	.....	.....	.....	29,871	36,065	—17.17	.....	.....	.....	Exports
Avg. new supply	101,547	94,839	+ 7.07	.....	.....	.....	.....	.....	.....	Avg. new supply
Avg. ship. to dom. distributors or users	.....	.....	.....	73,000	69,774	+ 4.62	.....	.....	.....	Avg. ship. to dom. distributors or users

Coke, Asphalt, Miscellaneous Products

	Coke Output (Tons)	Coke Stocks (Tons)	Asphalt Output (Tons)	Asphalt Stocks (Tons)	Miscel. Products Output (Bbls.)	Miscel. Products Stocks (Bbls.)	Unfin. Oil Output (Bbls.)	Unfin. Oil Stocks (Bbls.)	Losses (Bbls.)	
January, 1928	103,200	331,300	202,000	219,000	613,000	1,183,000	2,293,000	36,762,000	2,142,000	January, 1928
February	100,100	335,100	207,000	233,900	633,000	1,297,000	2,199,000	37,282,000	1,976,000	February
March	107,200	352,400	265,200	269,800	659,000	1,527,000	2,282,000	37,128,000	2,268,000	March
April	109,400	342,100	273,800	273,700	656,000	1,601,000	2,478,000	38,215,000	2,222,000	April
May	118,400	348,300	330,700	262,200	879,000	1,392,000	2,792,000	38,762,000	2,398,000	May
June	118,100	343,700	331,600	270,800	892,000	1,130,000	2,325,000	38,380,000	2,578,000	June
July	127,000	384,900	330,800	247,200	938,000	1,200,000	2,787,000	40,657,000	2,820,000	July
August	136,100	402,100	316,400	225,500	991,000	857,000	2,530,000	39,596,000	2,660,000	August
September	119,100	402,200	305,600	202,900	873,000	748,000	2,226,000	39,732,000	2,644,000	September
October	125,000	404,400	319,800	209,900	867,000	723,000	1,954,000	38,452,000	2,657,000	October
November	131,000	418,800	244,400	228,000	723,000	726,000	2,838,000	38,114,000	2,388,000	November
December	132,000	436,900	169,800	235,500	677,000	635,000	3,166,000	38,601,000	2,275,000	December
January, 1929	137,900	403,800	188,400	229,100	661,000	653,000	2,513,000	38,264,000	2,542,000	January, 1929
February	126,700	388,100	208,200	235,600	617,000	652,000	2,273,000	38,170,000	2,059,000	February
March	129,400	402,400	227,500	250,100	738,000	691,000	2,873,000	38,471,000	2,602,000	March
April	130,700	444,900	282,600	248,800	763,000	735,000	4,553,000	39,645,000	2,910,000	April
May	141,900	471,200	315,100	236,300	994,000	814,000	4,405,000	40,305,000	2,701,000	May
June	153,800	498,400	326,900	247,100	1,114,000	750,000	4,333,000	*42,722,000	3,283,000	June
July	157,900	563,900	386,000	243,300	1,097,000	733,000	3,580,000	42,440,000	3,328,000	July
August	168,900	608,000	378,700	246,800	976,000	742,000	3,444,000	43,251,000	3,545,000	August

*Revised

Lubricating Oil Supply and Demand — Barrels

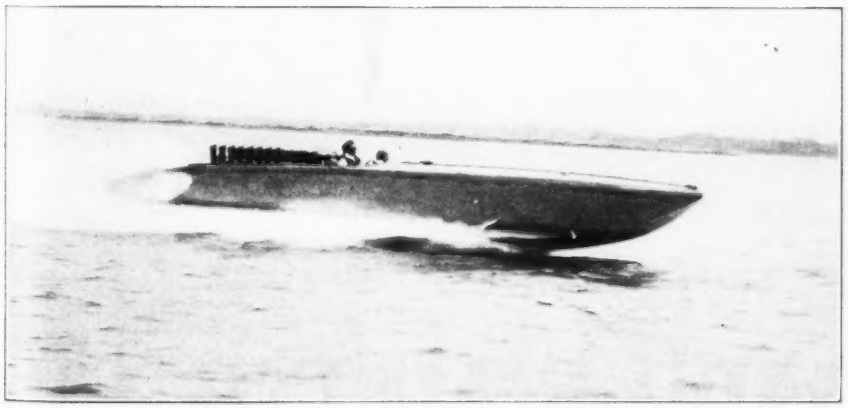
	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January	2,654,000	.....	934,000	1,592,000	7,988,000
February	2,728,000	.....	841,000	1,543,000	8,332,000
March	2,878,000	.....	837,000	1,990,000	8,383,000
April	3,027,000	1,000	1,059,000	2,334,000	8,018,000
May	3,091,000	3,000	1,063,000	1,989,000	8,060,000
June	3,009,000	1,000	1,095,000	2,143,000	7,832,000
July	2,828,000	1,000	1,063,000	1,931,000	7,667,000
August	2,891,000	1,000	813,000	2,035,000	7,711,000
Total Eight Months	23,106,000	7,000	7,705,000	15,557,000	7,711,000
September	2,833,000	1,000	808,000	1,995,000	7,742,000
October	2,979,000	1,000	769,000	2,123,000	7,830,000
November	2,748,000	1,000	895,000	1,763,000	7,921,000
December	2,993,000	3,000	878,000	1,699,000	8,340,000
1928 Total	34,659,000	13,000	11,055,000	23,137,000	8,340,000
January, 1929	2,945,000	1,000	1,116,000	1,521,000	8,649,000
February	2,503,000	4,000	871,000	1,751,000	8,534,000
March	2,943,000	2,000	1,045,000	1,581,000	8,853,000
April	2,899,000	3,000	786,000	2,628,000	8,341,000
May	3,005,000	4,000	844,000	2,322,000	8,370,000
June	2,928,000	6,000	989,000	*2,446,000	*7,869,000
July	2,936,000	4,000	1,118,000	2,167,000	7,524,000
August	3,143,000	5,000	926,000	2,268,000	7,478,000
Total Eight Months	23,302,000	29,000	7,695,000	16,684,000	7,478,000
Change This Year Over Like Period					
Last Year	+196,000	+22,000	+10,000	+1,127,000	—233,000
Per Cent	+0.85	+314.28	+0.13	+7.24	—3.02

*Revised.

Paraffin Wax Supply and Demand — Pounds

	Production	Imports	Exports	Domestic Shipments	Stocks End of Month
January, 1928	55,378,000	1,117,000	39,712,000	17,696,000	149,725,000
February	49,158,000	1,337,000	38,036,000	25,705,000	136,479,000
March	50,170,000	1,767,000	40,147,000	28,747,000	119,522,000
April	57,548,000	2,996,000	34,122,000	36,235,000	109,709,000
May	51,072,000	1,855,000	34,826,000	24,171,000	103,639,000
June	50,792,000	1,715,000	33,594,000	30,563,000	91,989,000
July	45,273,000	2,226,000	35,290,000	19,722,000	84,476,000
August	54,429,000	2,793,000	31,446,000	30,630,000	79,622,000
Total Eight Months	413,820,000	15,806,000	287,173,000	213,469,000	79,622,000
September	50,428,000	1,880,000	26,396,000	20,117,000	85,417,000
October	54,546,000	1,930,000	26,281,000	22,798,000	92,814,000
November	56,665,000	2,994,000	25,170,000	23,354,000	103,949,000
December	54,685,000	2,138,000	26,603,000	23,825,000	110,344,000
1928 Total	630,144,000	24,748,000	391,623,000	303,563,000	110,344,000
January, 1929	58,885,000	2,982,000	28,065,000	20,625,000	123,521,000
February	50,027,000	3,120,000	25,359,000	11,256,000	140,053,000
March	56,372,000	2,575,000	22,127,000	18,469,000	158,404,000
April	57,976,000	2,680,000	22,664,000	25,709,000	170,687,000
May	53,783,000	2,748,000	18,662,000	29,417,000	179,139,000
June	52,714,000	3,070,000	24,986,000	21,173,000	188,764,000
July	46,171,000	4,606,000	24,445,000	23,798,000	191,298,000
August	53,377,000	5,433,000	28,114,000	31,116,000	190,878,000
Total Eight Months	429,305,000	27,214,000	194,422,000	181,563,000	190,878,000
Change This Year Over Like Period					
Last Year	+15,485,000	+11,408,000	—92,751,000	—31,906,000	+111,256,000
Per Cent	+3.74	+72.17	—32.30	—14.95	+139.73

Oil Man's Boat in Regatta



—Photo Courtesy Power Boating

The "Miss Los Angeles" entered by J. A. Talbot, chairman of the Richfield Oil Co. of California in the Gold Cup regatta, North Shrewsbury river, Red Bank, N. J., on Aug. 24, 25. "Miss Los Angeles" took third place. The regatta this summer was a revival, after a lapse of about four years, of one of the traditional motor boat races

For CLEAN SPEEDY PORTABLE Grease Dispensing SERVICE!

BENNETT 100 POUND GREASING OUTFIT

The new, improved, watertight, dust-proof Bennett 100 lb. Greasing Outfit possesses real service advantages for the dealer who is interested in speedier grease dispensing. The outfit can easily be handled over dirt and cinders and placed in position for greasing in small and congested places. Typical Bennett Quality Built throughout.

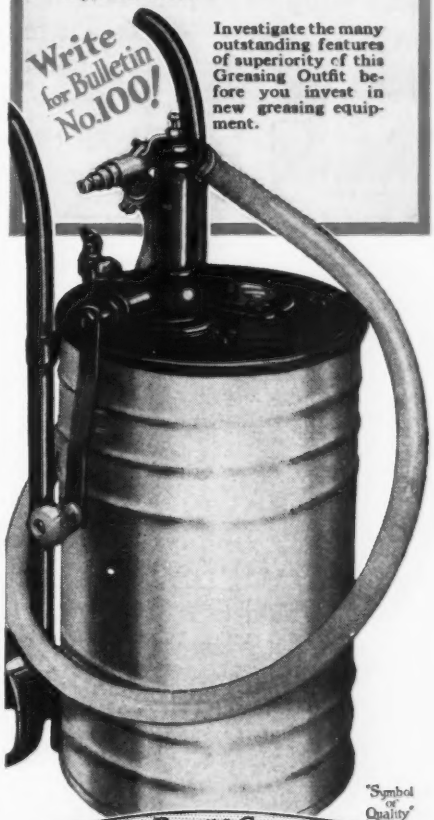
Self-Closing NON-DRIP NOZZLE

New self-closing patented non-drip nozzle with flanges arranged to fit any style transmission. Positive shut-off valve—the only "one-man" nozzle on the market.

BENNETT PUMPS CORP., Muskegon, Mich.
SERVICE STATION EQUIPMENT CO., LTD., Toronto and Winnipeg.
REPUBLIC STEEL PACKAGE CO. OF CALIF., Richmond, Calif.
BENNETT EXPORT CORP., 32 Broadway, New York.

Write for Bulletin No. 100!

Investigate the many outstanding features of superiority of this Greasing Outfit before you invest in new greasing equipment.



"Symbol of Quality"

Bennett Pumps Corporation
QUALITY BUILT
Bennett
Dispensing Equipment
FOR OIL MARKETERS
Muskegon, Michigan

From the Oil Well to the Jobber

This is Chapter Five of the Story of My Life and Travels.

CONDENSING

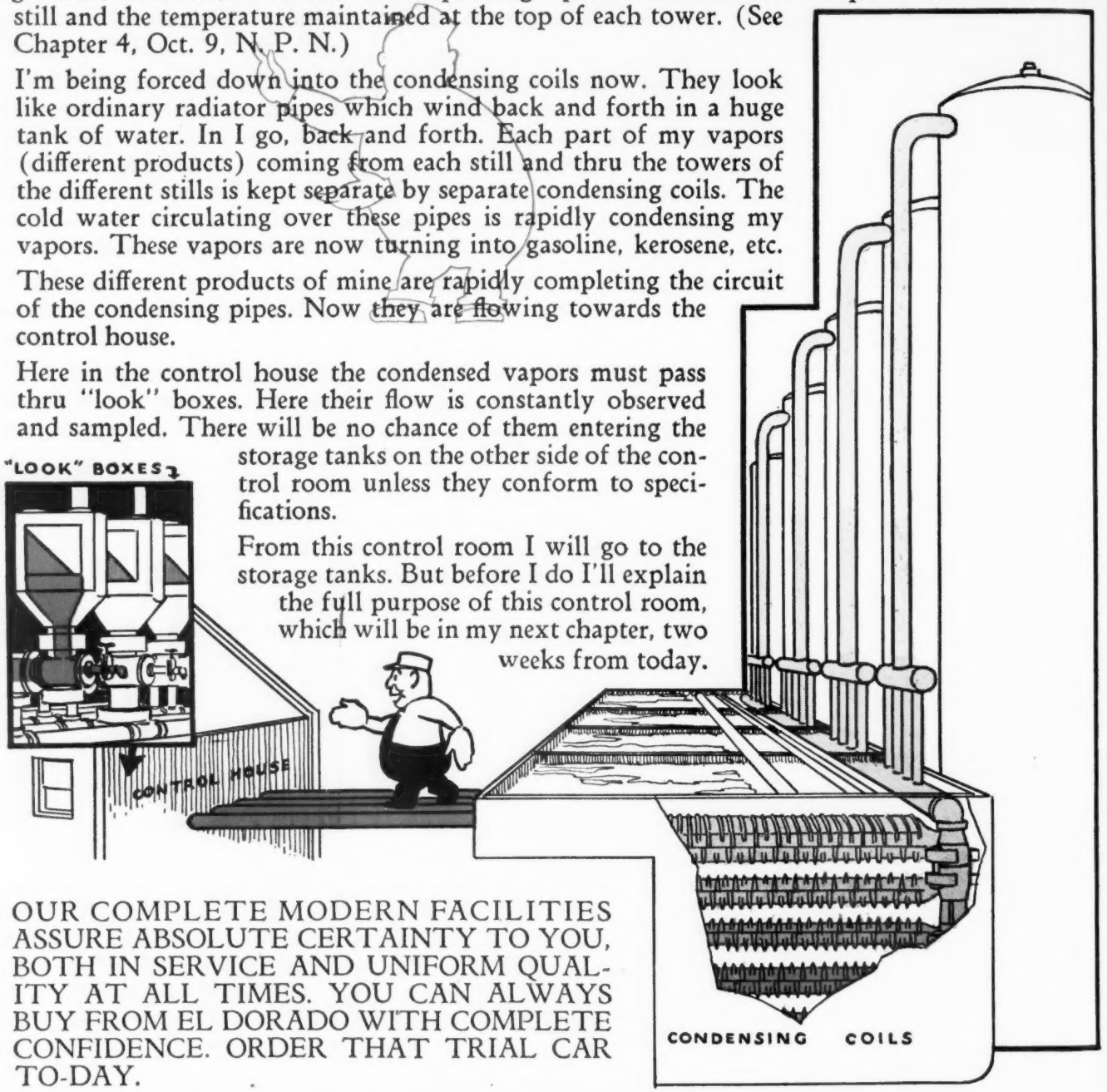
At last! I'm getting out of these refractionating towers. Part of my vapors are coming from the tops of each tower. But they won't be vapors long. They will become different products such as gasoline, kerosene, distillate, etc., depending upon the amount of temperature under each still and the temperature maintained at the top of each tower. (See Chapter 4, Oct. 9, N. P. N.)

I'm being forced down into the condensing coils now. They look like ordinary radiator pipes which wind back and forth in a huge tank of water. In I go, back and forth. Each part of my vapors (different products) coming from each still and thru the towers of the different stills is kept separate by separate condensing coils. The cold water circulating over these pipes is rapidly condensing my vapors. These vapors are now turning into gasoline, kerosene, etc.

These different products of mine are rapidly completing the circuit of the condensing pipes. Now they are flowing towards the control house.

Here in the control house the condensed vapors must pass thru "look" boxes. Here their flow is constantly observed and sampled. There will be no chance of them entering the storage tanks on the other side of the control room unless they conform to specifications.

From this control room I will go to the storage tanks. But before I do I'll explain the full purpose of this control room, which will be in my next chapter, two weeks from today.



OUR COMPLETE MODERN FACILITIES ASSURE ABSOLUTE CERTAINTY TO YOU, BOTH IN SERVICE AND UNIFORM QUALITY AT ALL TIMES. YOU CAN ALWAYS BUY FROM EL DORADO WITH COMPLETE CONFIDENCE. ORDER THAT TRIAL CAR TO-DAY.

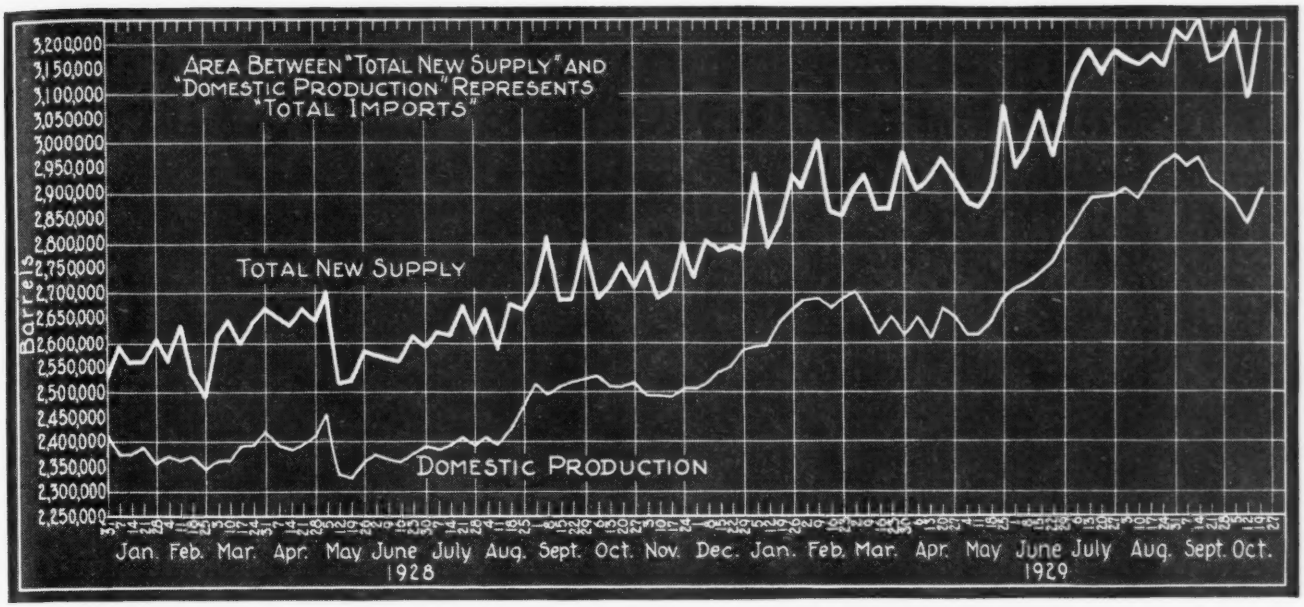
THE · EL · DORADO · REFINING · CO.

ESTABLISHED 1916

· EL · DORADO, · KANSAS ·

JUST CALL L.D. 11

Daily Average Crude Oil Production and Imports



Daily average gross output of United States, by fields, for week ending with dates below as compiled by American Petroleum Institute

PRODUCTION SUMMARY

	Oct. 19	Oct. 12
Production east of Rockies	2,020,700	1,965,000
Increase		55,100
Total production in U. S.	2,903,200	2,838,100
Increase		65,100
Crude oil imports	317,286	253,000
Increase		64,286
Total crude supply	3,220,486	3,091,100
Increase		129,386

OKLAHOMA

	Oct. 19	Oct. 12
Allen Dome	24,550	24,200
Asher	7,000	7,200
Blackwell	3,800	3,800
Bowlegs	30,650	30,750
Braman	4,000	4,050
Bristow-Slick	20,500	21,000
Burbank	18,100	18,100
Carr City	10,150	9,700
Cromwell	7,800	7,800
Cushing	15,750	15,850
Davenport	1,350	1,350
Duncan District	8,000	7,900
Earlsboro	69,100	74,400
East Seminole	6,500	7,300
Fox	1,350	1,300
Garber	4,550	4,750
Graham	4,000	4,000
Healdton	12,550	12,550
Hewitt	7,750	7,750
Hubbard	1,800	1,800
Little River	79,350	81,950
Logan County	16,500	17,500
Maud	10,100	10,600
Mission	20,050	22,300
North Okmulgee	12,300	12,300
Oklahoma City	75,450	1,000
Osage (outside Burbank)	25,850	25,950
Papoose	3,300	3,300
Pearson	1,000	1,050
St. Louis	56,150	58,650
Sasakwa	12,100	12,200
Scholem-Alechem	12,750	12,750
Searight	11,300	11,500
Seminole	31,150	31,950
South Okmulgee	7,850	7,900
Thomas	750	750
Tonkawa	8,500	8,500
Wewoka	4,300	4,350
Yale-Jennings	6,500	6,500
Others	53,750	54,000
Total, Oklahoma	708,250	650,550
Decrease		57,700

KANSAS

	Oct. 19	Oct. 12
Augusta-Fox Bush	2,950	2,950
Churchill	6,100	6,350
Eldorado-Towanda	13,000	13,050
Florence-Covert	950	950
Greenwood County	20,350	20,500
Oxford	4,000	3,900
Peabody-Elbing	3,250	3,250
Rainbow Bend	1,050	1,100
Russell	3,050	3,050
Sedgwick County	20,800	21,000
Others	36,000	36,000
Total, Kansas	111,500	112,1000
Decrease		600

NORTH LOUISIANA

	Oct. 19	Oct. 12
Bellevue	650	650
Caddo, light	13,700	15,350
Caddo, heavy	3,050	3,150
Cotton Valley	2,500	2,500
De Soto and Red River	3,150	3,150
Elm Grove	550	550
Haynesville	4,850	4,850
Homer	3,800	3,850
Pleasant Hill	1,050	1,050
Urania	5,750	5,700
Others	400	400
Total, North Louisiana	39,450	41,200
Decrease		1,750

ARKANSAS

	Oct. 19	Oct. 12
Champagnolle	5,600	5,500
El Dorado	4,400	4,400
Lisbon	1,150	1,200
Nevada	1,050	1,050
Smackover, light	5,800	5,800
Smackover, heavy	45,700	45,400
Stephens	1,000	1,000
Others	100	100
Total, Arkansas	64,800	64,450
Increase		350

TEXAS (Outside Gulf Coast)

Panhandle District

	Oct. 19	Oct. 12
Carson County	9,750	9,300
Gray County	67,200	68,800
Hutchinson County	29,000	26,600
Wheeler County	800	600
Others	900	900
Total, Panhandle Texas	107,650	106,200
Increase		1,450

North Texas

	Oct. 19	Oct. 12
Archer County	18,600	18,700
Burkburnett	9,200	9,350
Electra	11,750	12,000
Iowa Park and K. M. A.	4,650	4,850
Montague-Cooke	17,000	17,200
Wilbarger	30,900	31,100
Others	800	800
Total, North Texas	92,900	94,000
Decrease		1,100

West Central Texas

	Oct. 19	Oct. 12
Brown County	10,500	9,150
Callahan County	3,500	3,500
Coleman County	7,600	7,750
Eastland-Desdemona	6,800	7,000
Jack County	3,900	4,000
Palo Pinto County	550	500
Shackleford County	10,000	10,000
Stephens County	6,400	6,400
Throckmorton County	600	600
Young County	6,500	6,600
Others	950	700
Total, West Central Texas	57,300	56,200
Increase		1,100

West Texas

	Oct. 19	Oct. 12
Crane and Upton Counties	45,100	46,150
Crockett County	2,300	2,500
Howard County	39,900	37,900
Jones County	3,000	3,700
Mitchell and Scurvy Counties	2,500	2,500
Pecos County	138,600	139,850
Reagan County	17,200	17,500
Winkler County	112,500	119,200
Others	3,400	2,600
Total, West Texas	364,500	371,900
Decrease		7,400

East Central Texas

	Oct. 19	Oct. 12
Boggy Creek	3,400	3,300
Coriscana-Powell	6,800	6,700
Currie	400	400
Mexia	5,150	5,100
Nigger Creek	300	250
Richland	350	350
Vanzandt County	1,000	.....
Wortham	1,050	1,000
Total, East Central Texas	18,450	17,100
Increase		1,350

Southwest Texas

	Oct. 19	Oct. 12
Dale	400	400
Laredo District	9,350	9,700
Luling	10,500	10,750
Lytton Springs	900	1,000
Refugio County	10,550	7,200
Salt Flat	37,000	38,400
Somerset	1,200	1,500
Others	3,100	1,200
Total, Southwest Texas	73,000	70,150
Increase		2,850
Total, Texas (Outside Gulf Coast)	713,800	715,550
Decrease		1,750

GULF COAST

Coastal Texas

	Oct. 19	Oct. 12
Barbers Hill	20,700	19,750
Batson	1,300	1,300
Big Creek	4,450	4,500
Blue Ridge	2,150	2,400
Boling	1,400	1,300
Damon Mound	600	600
Goose Creek	5,700	5,600
Hull	10,800	10,250
Humble	13,100	12,000
Orange County	2,750	2,800
Pierce Junction	11,400	9,850
Raccoon Bend	8,650	8,600
Saratoga	1,000	1,000
Somerville	2,000	1,950
Sour Lake	2,600	2,800
South Liberty	5,850	6,500
Spindletop	23,300	23,100
Sugarland	11,400	11,250
West Columbia	6,700	6,700
Others	7,650	6,300
Total, Coastal Texas	143,500	138,550
Increase		4,950

Coastal Louisiana

	Oct. 19	Oct. 12
East Hackberry	1,800	2,000
Edgerly	600	650
Evangeline	1,700	1,750
Lockport	4,100	4,100
Old Hackberry	2,300	2,800
Sorrento Dome	150	150
Sulphur Dome	7,600	8,700
Vinton	4,200	4,200
Others	2,300	2,250
Total, Coastal Louisiana	24,750	26,600
Decrease		1,850
Total Gulf Coast	168,250	165,150
Increase		3,100

ROCKY MOUNTAIN

Wyoming

	Oct. 19	Oct. 12
Big Muddy	2,250	2,300
Elk Basin	750	750
Grass Creek	2,150	2,150
Labarge	2,200	2,550
Lance Creek	200	200
Lost Soldier	3,950	4,150
Oregon Basin	4,550	5,200
Rock Creek	2,300	2,350
Salt Creek	32,300	32,450
Others	4,300	4,200
Total, Wyoming	54,950	56,300
Decrease		1,350

Montana

	Oct. 19	Oct. 12
Cat Creek	1,300	1,250
Pondera	2,600	2,600
Sunburst	6,800	6,900
Others	50	50
Total, Montana	10,750	10,800
Decrease		50

Colorado

	Oct. 19	Oct. 12
Florence	750	800
Fort Collins	1,850	1,900
Moffat (Craig)	1,150	1,250
Others	1,700	1,650
Total, Colorado	5,450	5,600
Decrease		150

New Mexico

	Oct. 19	Oct. 12
Artesia	850	850
Balance, Lea & Eddy County	3,000	3,000
Hogback	400	400
Rattlesnake	1,700	1,800
Table Mesa	100	100
Others	400	400
Total, New Mexico	6,450	6,550
Decrease		100
Total, Rocky Mountain	77,600	79,250
Decrease		1,650

CALIFORNIA

	Oct. 19	Oct. 12
Domigruez	8,000	8,500
Elwood-Goleta	31,500	25,000
Huntington Beach	42,000	42,500
Inglewood	23,000	23,000
Kettleman Hills	10,000	10,000
Long Beach	169,000	171,000
Midway Sunset	71,500	70,000
Santa Fe Springs	273,000	265,000
Seal Beach	38,500	41,000
Ventura Avenue	62,500	63,000
Others	153,500	153,500
Total, California	882,500	872,500
Increase		10,000

EASTERN

	Oct. 19	Oct. 12
(Including Ill., Ind., Ky., O., W. Va., Pa., and N. Y.)	120,250	120,000
Increase		250
Michigan	16,800	17,350

NATIONAL ADVERTISING

lets you share the advantages of WIDE DISTRIBUTION

The caveman worked alone . . .

it was not until human beings gathered into families, clans and tribes that the world began to go forward.

And, in these modern days, it is still a hard task for the man who works alone to build anything. If you carry nationally advertised gasoline and motor oil, you are not working alone—your burden is lighter—you belong to a great business group—you have the selling help of a widely known organization—the dealers in other states display the same signs you do and their customers touring the country are more likely to drive into your station because your signs give them confidence. National advertising links Sinclair dealers—helps one create business for the other—helps them all build good will with good oils and good service.

SINCLAIR REFINING COMPANY, INC., 45 Nassau Street, New York

Atlanta · Boston · Chicago · Houston · Kansas City

SINCLAIR

OPALINE

REG. U.S. PAT. OFF.

is **NATIONALLY ADVERTISED AS THE** *Extra Service* **MOTOR OIL**

Natural Gasolines and Fuel Oils Most Active in Mid-Continent

Staff Special
TULSA, Oct. 19.

ACTIVE demand for natural gasolines, as refiners bought heavily to give their gasolines more "pep" for the winter months, was the feature of the Mid-Continent market the third week of October. Prices moved up under pressure of the heavy buying and goods for prompt shipment became scarcer.

Domestic demand for refined gasolines was generally unchanged, with contracts accounting for the bulk of the shipments. Export inquiries were reported in the field but no purchases were revealed. Generally speaking, prices were unchanged from the previous week.

Kerosene demand from domestic trade was light as the season drew nearer the end. An export inquiry was reported but no purchases had been made by close of business Oct. 19.

Gas oils and stove distillates were more freely offered but prices were generally unchanged. Fuel oils of all grades were in active demand, with some grades advancing in price. A scarcity of the commodity was reported.

Bright stocks were scarce. Neutral oils were generally unchanged. Wax was in better demand and prices moved up to 3 cents a pound.

Natural Gasolines

Sizeable purchases by large Eastern and Middle-western refiners and one for shipment to an export terminal at the Gulf, with a resultant scarcity of natural gasolines, featured the Oklahoma market the third week of October. Approximately 1200 cars of various grades were moved out of the market, with storage drawn on substantially at one or two sources of supply in order to meet the heavy demand. Additional over the month business accepted by a number of manufacturers indicated they will be practically sold up for the balance of October.

The continued shortage of insulated tank cars coupled with the large buying put the market in a tighter condition than for some time.

The entrance of one or two of the larger refiners was somewhat of a surprise to most of the trade. It was understood that this is the first time in several years that the Standard Oil Co. of Indiana has bought natural gasolines in the Mid-Continent markets. Carter Oil Co. bought a quantity of material around the first of the week for the account of the Standard Oil Co. of New Jersey in addition to the 400-car order of grade AA placed the week previous.

It is now the season for refiners to put more "pep" in their gasoline which accounts for the bulk of the buying. Naturals were reported scarce in West Virginia markets, due to a large demand there the past few weeks and in all probability eastern buyers were unable to obtain sufficient goods for immediate requirements and were forced to seek their blending material in other markets.

The export order was for approximately 100 cars of grade AA.

Gasolines

Despite the favorable weather reported throughout the Mid-Continent marketing territory and the fairly good consumption considering the time of the year, gasolines were quiet on the spot market. A majority of refiners continued to ship out the maximum on contracts.

Inquiries for export were reported in the field but no sales had been reported prior to close of business Oct. 19.

A majority of Oklahoma refiners reported business light at the unchanged quotation of 7.75 cents for 58-60 U. S. Motor gasoline.

About the only price change of consequence in the Mid-Continent was in Arkansas and Louisiana. The previous week's range on 58-60 U. S. Motor at 7.375 to 7.50 cents narrowed down to 7.375 cents for differential territory shipments.

An unsettled condition prevailed in Kansas markets with a wide range in quotations. U. S. Motor gasoline for shipment within Kansas sold mostly at 7.50 to 7.75 cents with occasional cars reported at 8 cents. Quotations on a Group 3 basis were from 6.75 cents up.

Practically no change was noted in north and west Texas markets, except that a more optimistic feeling appeared among the refiners.

Kerosene

Aside from an export inquiry for 1,000,000 gallons of 44-46 gravity kerosene for shipment around Oct. 21, reported received by one refiner in Louisiana, the kerosene market was quiet. Up to close of business Oct. 19 this inquiry had not developed any business so far as could be learned.

Additional buying by one large exporter late the previous week gave north Texas refiners some relief. No advance in prices was noted but the buying apparently checked the downward trend.

Most sellers of kerosene were of the opinion that seasonal buying was over and that much of the present production will go into storage until the spring demand sets in.

Fuel Oils

All grades of fuel oils were active. The 28-30 and 24-26 grades were almost unobtainable and quotations ranged from 2.50 to 5 cents higher on both grades.

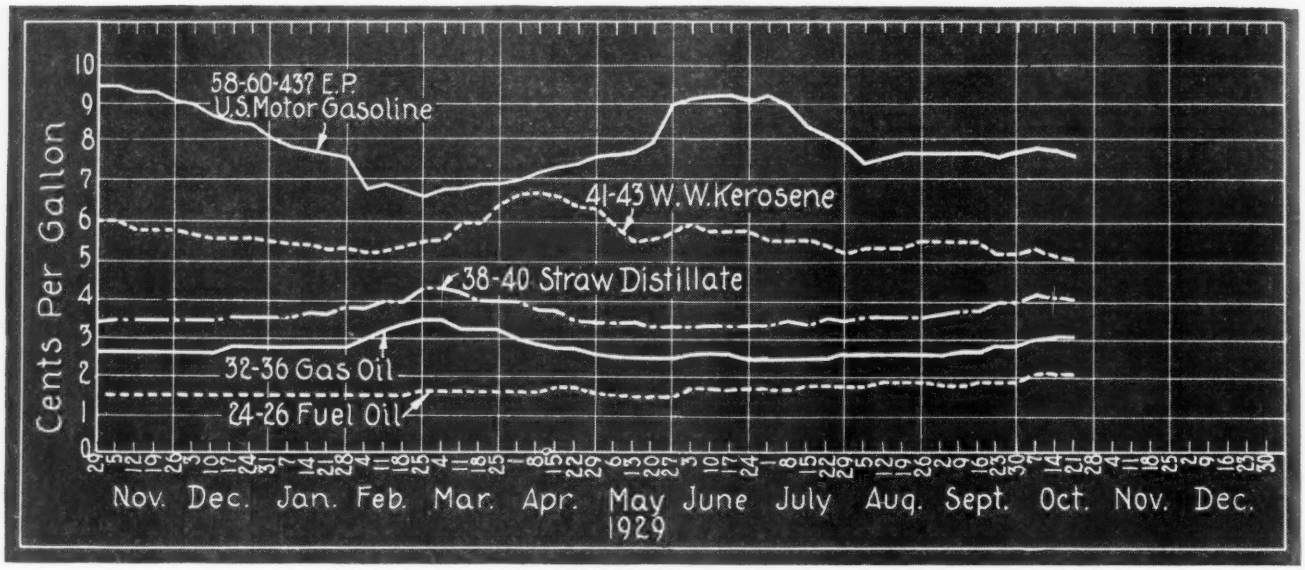
The less desirable grades were in active demand, with the lower gravities in all districts moving toward higher prices.

Refiners in most areas continued to store the greater part of their fuel production suitable for cracking stock and this has brought on the shortage of high gravity grades in the open market. Reports were heard from one or two refiners that they were not quoting for spot business at present.

Gas Oil and Distillates

The continued mild weather has slowed up the demand for burning oils. While prices have not shown

Current Prices of Principal Mid-Continent Refined Products



Prices shown are in Group 3 basis and extended to date shown in Refinery Market Tables Section of this issue

any material change, more goods were available for immediate shipment at prevailing prices with odd sales slightly under the previous week's figures.

This was especially true in north and west Texas districts where in weeks past a good demand for gas oils had come from the cotton ginners.

Goods in Arkansas, Louisiana, and Kansas were comparatively scarce. In Arkansas and Louisiana districts there was a slight advance in prices.

Bright Stocks, Neutral Oils, and Wax

Bright stocks were tight for both prompt and deferred shipment. Prices were unchanged with the exception of the E color goods which advanced fractionally. Scarcity of the better grades caused more buyers to seek this grade when prompt shipment was assured.

One of the larger manufacturers of wax in the Mid-Continent field reported an exceptionally good demand for this product. Buyers in the Middle West and Eastern districts were seeking fairly large orders the past week and a good export turnover was reported from the Eastern Seaboard. Goods were not available under 3 cents a pound for immediate shipment.

Correction

Information arriving too late to correct natural gasoline prices on page 106 of the Oct. 16 issue of NATIONAL PETROLEUM NEWS, indicates that prices of both Oklahoma and North Texas naturals, grades B, BB and C, should have been 6.375 cents flat on Oct. 14, instead of 6.25 to 6.375 cents. Prices are corrected in the Oct. 14 column of prices in the refinery table pages of this issue.

Shipments From Southern California

LOS ANGELES, Oct. 17.—Bulk petroleum shipments from southern California ports for week ended Oct. 12 were as follows:

Destination	Fuel	Diesel	Gasoline	Distillate	Gas Oil	Crude
Pacific foreign	168,447	35,678	113,621	.....	.....	64,091
Atlantic domestic	.....	.....	358,374	73,939	71,272	.....
Atlantic foreign	.....	.....	191,000	.....	133,558	.....

Bulk petroleum shipments from southern California ports for the month of September showed a decrease of 3,034,481 barrels under the shipments from the same ports for the month of August. The shipments for September were as follows:

Destination	Crude	Gasoline	Kerosene	Distillate	Diesel	Fuel
Pacific domestic	2,846,067	868,177	7,835	.....	83,187	1,655,872
Pacific foreign	503,779	418,188	118,079	16,571	174,428	1,817,486
Atlantic domestic	.....	1,678,479	49,000	386,605	233,085	.....
Atlantic foreign	.....	933,621	23,875	.....	51,819	.....

Shipments from southern California ports for 1929 up to Oct. 1 were as follows:

Destination	Crude	Gasoline	Kerosene	Distillate	Diesel	Fuel
Pacific domestic	19,101,685	17,417,656	88,567	79,283	885,081	16,346,149
Pacific foreign	4,996,129	2,145,693	2,025,266	93,448	1,731,145	13,666,728
Atlantic domestic	926,989	15,550,043	843,032	614,653	845,869	122,339
Atlantic foreign	.....	7,403,075	183,591	.....	462,694	134,355

Figures are all in barrels.

Prices 10 Years Ago
Oct. 20, 1919

	Oklahoma	Penna.
50-60 U. S. Motor	17.00–17.25c	20.00–20.25c
80-84 Natural	22.75–23.00c	.....
Kerosene (41-43 Okla.; 47 w. w. Pa.)	10.00–10.50c	12.75c
Fuel Oil (24-26 Okla.; 38-40 Pa.)	$0.90	6.00–6.50c
Crude (Okla. 35-35.9)	$2.25	$4.25
Chicago tank wagon	.....	21.00c

Prices A Year Ago
Oct. 22, 1928

	Oklahoma	Penna.
58-60 U. S. Motor	9.7331c	11.00–11.50c
Grade A Natural	9.625c	.....
Kerosene (Okla. 41-43; Pa. 47 w. w.)	6.00–6.125c	8.125–8.875c
Fuel Oil (Okla. 24-26; Pa. 36-40)	$0.65–$0.675	4.50–5.00c
Crude (Okla. 35-35.9)	$1.31	$3.35
Chicago tank wagon	.....	15.00c

Chicago Resale Market

Burning Oil Prices Recede Slightly

Staff Special
CHICAGO, Oct. 19

THE Chicago resale market rocked along on a fairly even keel the past week with very little change apparent for any product. The mild weather throughout the middle west was a bullish factor in the gasoline market, while it apparently helped to slacken demand for burning oils.

The Chicago trade was about evenly divided on the status of the gasoline market Oct. 19. Some sellers reported that spot prices were tending lower than early in the week, while others said that there was very little change and that the tendency, for the present at least, was upward. The chief reasons given for this bullish tendency were: the favorable motoring weather, the export buying which occurred during the week, and the apparent ability of the Mid-Continent producers to hold down crude production.

The wide spread of prices which has characterized the gasoline market for the past two months still was in evidence this week. The larger refiners continued to quote their U. S. Motor gasoline at 7.75 cents, although their spot sales were admittedly low. However, they reported doing an excellent contract business and those owning their own stations reported that gallonage still was high.

Most of the smaller Oklahoma refiners reported a fair spot business and generally were quoting around 7 to 7.375 cents. The larger portion of the Chicago carlot marketers quoted 6.875 to 7 cents on full specification goods. U. S. Motor from other refining districts was about on the same level with Oklahoma.

Reports from marketers on Oct. 19 indicated that there was less full specification Motor available for resale at 6.625 cents than earlier in the week and that virtually all the 6.50 cent goods had disappeared. On the other hand, there was apparently more goods being offered to jobbers at 6.75 cents. One reason for this was that due to the light spot demand, more marketers were willing to take only 0.125 cent per gallon profit instead of 0.25 cent as is generally the case.

The kerosene market continued in the doldrums. Demand has been consistently light during the past month or so and this week was no exception for most sellers. Spot prices on the 41-43 w.w. kerosene were off about 0.25 cent during the week. Refiners, who had quoted 5.25 cents on Oct. 14, were generally asking 4.875 or 5 cents on Oct. 19. Sales were reported as low as 4.50 cents, but the bulk of business apparently was done at 4.625 to 5 cents.

Distillates were more freely offered in most quarters this week and prices were down about 0.125 cent. A few refiners continued to quote the 38-40 light straw above 4 cents, and several marketers said they would sell at 3.75 cents, but the bulk of sales reported toward the end of the week were at 3.875 to 4 cents.

Mild temperatures and the aversion of burner oil distributors to add any more goods to their storage brought about a quiet week on gas and fuel oils. Many distributors reported they were unable to accept any more supplies until cold weather causes their business to improve.

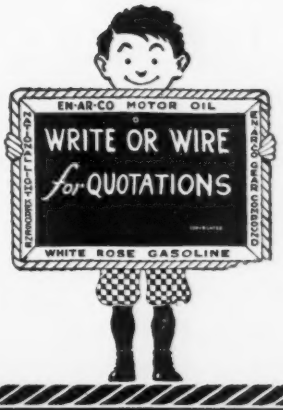
Notwithstanding the light demand, there was very little change in prices of gas and fuel oils. There was more 32-36 straw zero being offered for prompt shipment and prices were down slightly. On the other hand, U.G.I. dark gas oil was up 0.125 cent and was very scarce for spot shipment. The 18-22 and 28-30 zero fuel oils still were available in only two or three places.

Fair weather is forecasted for the Standard of Indiana territory the first half of next week, with a rainy spell likely during the second half. Temperatures should remain normal or slightly above.

Henry Mason Day Married

WASHINGTON, Oct. 19.—Henry Mason Day, vice president of the Sinclair Exploration Co. and Miss Dorothy Marie Ridenour, of Washington, were married at Ballston, Va., Oct. 11. Mr. Day went to school at Ballston when he was a youth. The parents of the bride and a few intimate friends were the only ones in attendance.

It was while Mr. Day was imprisoned in the District of Columbia jail for contempt of court for his part in having the jury in the Sinclair case watched, that reports of his engagement with Miss Ridenour began circulating. They arose from the fact that Miss Ridenour visited the jail several times while Mr. Day was serving a four-months term.



En-ar-co
MOTOR OIL
White Rose
GASOLINE

YOU will make money if you handle these nationally advertised brands.

All grades of lubricating oils and greases.

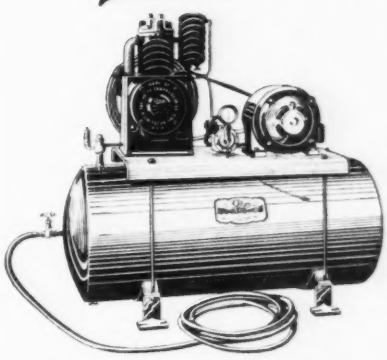
The National Refining Co.
Cleveland, Ohio

ALL-PURPOSE UNIT

In addition to tire inflating you have to do Paint Spray work, you operate one hydraulic hoist or you have air operated gasoline pumps.

You need this 2 H. P. unit with 60 gallon tank, which we are offering at a remarkable price. Remember, there are 20 years of compressor building behind every 'Oro' Air Compressor.

The Oro T 58
GOOD as GOLD



Ask your jobber to sell you for $215

If your jobber does not carry, ask us.

THE AU-TO COMPRESSOR CO.
197 Mulberry St. Wilmington, Ohio
Export office, 126 Liberty St., New York City

Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, F.O.B. refinery except where $ is shown

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

Comparative Prices of 58-60 U. S. Motor Gasoline, 437 E. P., Group 3 and Point of Origin, to Jobbers Only

In Effect October 21

	Price F.O.B. Group 3	*Price F.O.B. Point of Origin*	*If for Particular Destination*
Oklahoma	7.6831 (Wt. Avg.)	7.6831 (Wt. Avg.)	
Kansas	6.75-7.25		S. O. Neb. & Ind. Ter., etc.
Kansas		7.7500 (Wt. Avg.)	Kansas only.
North Texas	6.75-7.00	6.75-7.00	
West Texas	7.00	6.75-7.00	
Louisiana-Ark.	7.00-7.25		Mich., Ohio & Indiana.
Louisiana-Ark.		7.375	State or differential haul.
Indiana-Illinois	6.875-7.75	*	S. O. Ind. territory except Detroit and vicinity. For Ohio on delivered basis only.

*Shipments made from E. Chicago, Ind., and Wood River, Ill., according to conditions and freight rates; no prices F.O.B. point of origin can be given.

Weighted Average Prices

OKLAHOMA

	Oct. 21		Oct. 14		Oct. 7	
	No. of cars	Price	No. of cars	Price	No. of cars	Price
58-60 U. S. Motor, 437 e. p.	71	7.6831	69	7.6721	69	7.6830
60-62 437 e. p. gasoline	1	7.6250	No sales reported		3	8.0000
60-62 400 e. p. gasoline	4	8.0625	3	8.0000	4	8.0313
64-66 375 e. p. gasoline	2	8.4375	5	8.4500	2	8.3125

The wide range of prices in Oklahoma for 58-60 United States Motor gasoline continued to exist, but the weighted average as shown above showed only fractional changes the past week. Spot shipments were reported lighter in most quarters but contract movement, which does not show in the compilation of the averages, was still at good levels.

KANSAS

	Oct. 21		Oct. 14		Oct. 7	
	No. of cars	Price	No. of cars	Price	No. of cars	Price
58-60 U. S. Motor, 437 e. p.	2	7.7500	1	7.7500	2	7.6875

Little change was noted in 58-60 United States Motor prices for Kansas shipment as is reflected by the above weighted average. Quotations on a group 3 basis, however, ranged from 6.75 cents up.

GASOLINE AND NAPHTHA

OKLAHOMA	Prices Oct. 21	Prices Oct. 14	Prices Oct. 7
48-50 450 e.p. naphtha	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
50-52 450 e.p. naphtha	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
56-58 450 e.p. gasoline	6.75 – 7.25	6.75 – 7.25	6.75 – 7.25
58-60 450 e.p. gasoline	6.75 – 7.375	6.75 – 7.375	6.875– 7.375
64-66 390 e.p. gasoline	7.75 – 8.125	7.75 – 8.125	7.75 – 8.125
68 70 350-360 e.p. gasoline	8.00 – 8.375	8.00 – 8.375	8.00 – 8.50

†Prices nominal ††Only one refiner quoting *Quotations only

CHICAGO RESALE (F. o. b. Group 3, altho goods may originate elsewhere)

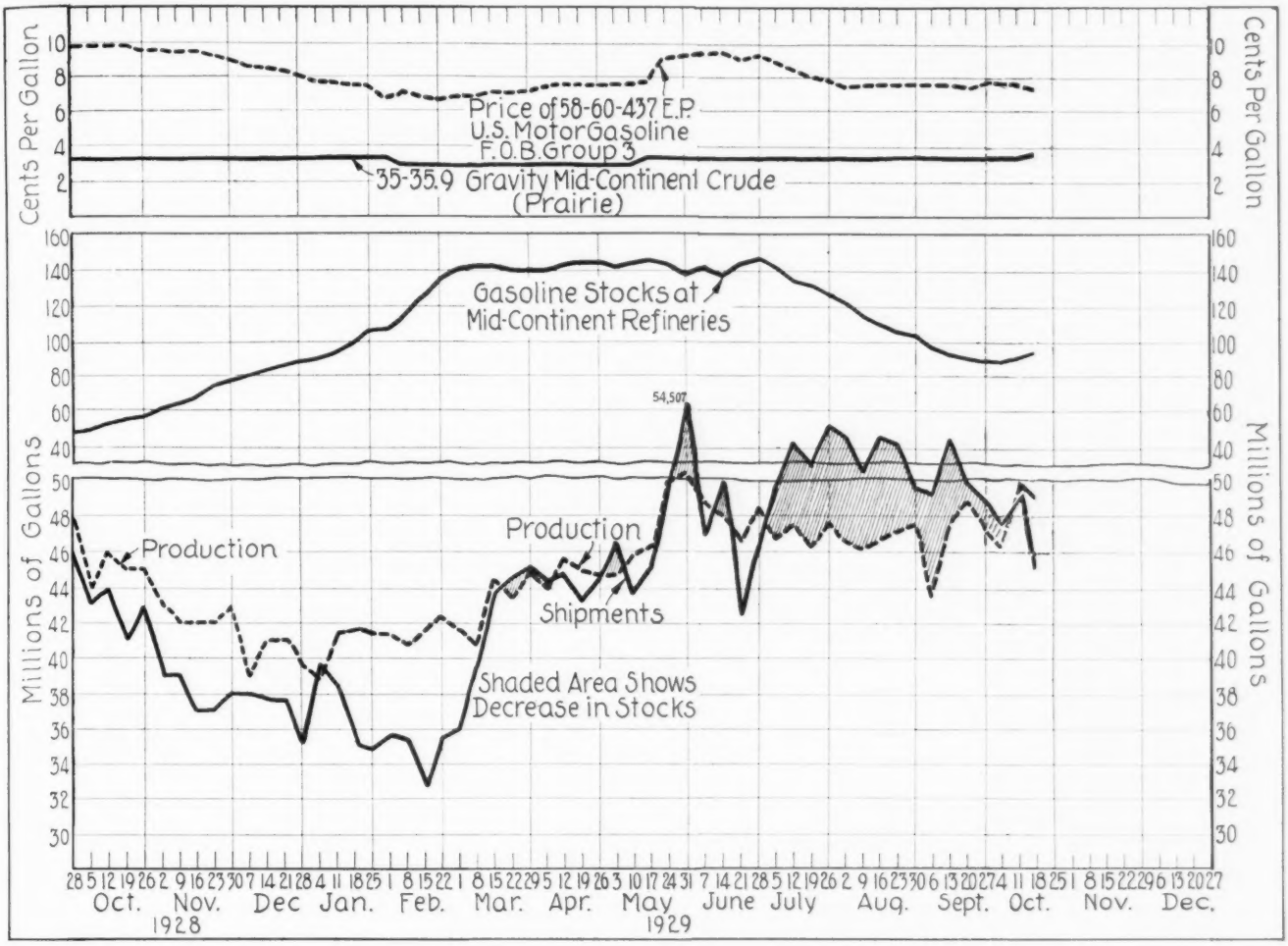
	Prices Oct. 21	Prices Oct. 14	Prices Oct. 7
58-60 U.S. Motor, 437 e.p.	6.875– 7.75	6.875– 7.75	7.00 – 7.75
60-62 437 e.p. gasoline	7.00 – 7.75	7.125– 7.75	7.125– 7.875
60-62 400 e.p. gasoline	7.375– 7.875	7.375– 7.875	7.50 – 7.875
64-66 375 e.p. gasoline	7.75 – 8.00	7.75 – 8.00	7.75 – 8.125

(Continued on Page 98)

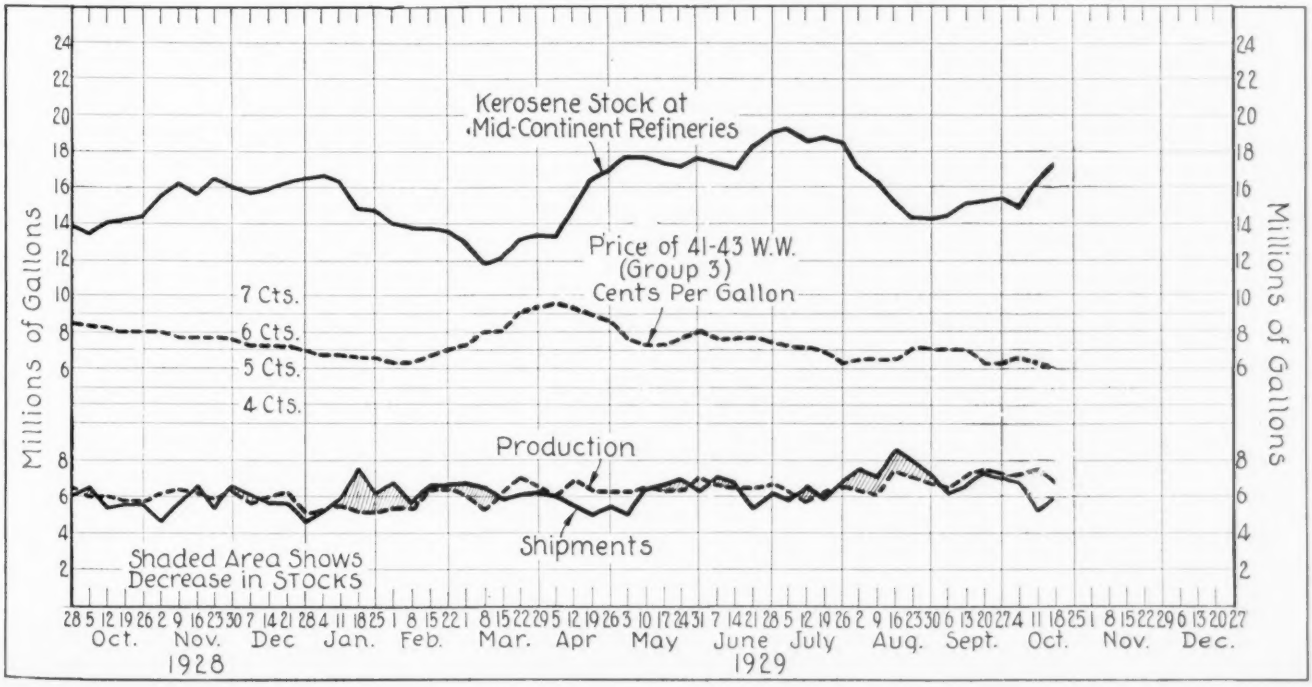
**Represents Both Sales and Quotations.

Barometer of Mid-Continent Refinery Market—Week Ending October 18

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News


Cents Per Gallon
Price of 58-60-437 E.P. U.S. Motor Gasoline F.O.B. Group 3
35-35.9 Gravity Mid-Continent Crude (Prairie)
Gasoline Stocks at Mid-Continent Refineries
54,507
Millions of Gallons
Production
Shipments
Shaded Area Shows Decrease in Stocks
Oct. Nov. Dec Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
1928
1929

Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date as shown in the table on page 90



Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, F. O. B. refinery except where $ is shown

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

PENNSYLVANIA

	Prices Oct. 21	Prices Oct. 14	Prices Oct. 7
52-54 Naphtha	7.50 – 8.25	7.75 – 8.25	8.00 – 8.25
54-56 Naphtha	7.75 – 8.25	8.00 – 8.50	8.00 – 8.50
58-60 U.S. Motor 437 e.p.	8.50 – 9.00	8.50 – 9.00	8.50 – 9.25
60-62 400-410 e.p. gasoline	8.75 – 9.25	9.00 – 9.50	8.75 – 9.50
64-66 390 e.p. gasoline	9.25 –10.00	9.50 –10.00	9.25 – 9.75
68-70 Str-run gas 350-360 e.p.	10.00 –10.75	10.00 –10.75	10.25 –10.75

OHIO (Quotations of S. O. Ohio. 4c state tax to be added.)

U. S. Motor Gasoline			
Ohio, delivery at any point	10.00	10.50	10.50

KANSAS (F. O. B. refinery Kansas destination)

60-62 400 e.p. gasoline	7.75 – 8.00	8.00 – 8.125	8.00 – 8.125
64-66 375 e.p. gasoline	8.00 – 8.25	8.25 – 8.375	8.25 – 8.375

NORTH TEXAS

56-58 450 e.p. gasoline	6.50 – 6.625	6.50 – 6.625	6.50 – 6.625
58-60 450 e.p. gasoline	6.625	6.625	6.625– 6.75
58-60 U.S. Motor 437 e.p.	6.75 – 7.00	6.75 – 7.00	6.75 – 7.00
60-62 400 e.p. gasoline	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25
64-66 390 e.p. gasoline	7.25 – 7.50	7.25 – 7.50	7.375– 7.50
64-66 375 e.p. gasoline	7.50 – 7.625	7.50 – 7.75	7.50 – 7.75
68-70 350-360 e.p. gasoline	8.00 – 8.25	8.00 – 8.25	8.00 – 8.25

****WEST TEXAS (F.o.b. West Texas refinery, for unrestricted shipment)**

50-52 naphtha	6.125– 6.25	6.125– 6.25	6.125– 6.25
‡58-60 437 e.p. gasoline	6.50 – 6.75	6.50 – 6.75	6.50 – 6.75
58-60 U. S. Motor 437 e.p. gasoline	6.75 – 7.00	6.875– 7.00	6.875– 7.00

‡Gravity changed from 56-58 to 58-60 Oct. 7.

NORTH LOUISIANA (N. La., Ark., and Miss. destination)

58-60 390 e.p. gasoline	7.375	7.375– 7.50	7.375

ARKANSAS (Ark., N. La. and Miss. destination)

58-60 U.S. Motor 437 e.p.	7.375	7.375– 7.50	7.375

CALIFORNIA (3c tax to be added to California gasoline prices if used in state.)

54-58 U.S. Motor 437 e.p.	‡7.25 – 8.25	7.25 –10.25	7.25 –10.25
58-61 375-400 e.p. gasoline	10.00 –11.25	10.75 –11.25	10.75 –11.25
42-45 Engine Distillate 445-480 e.p.	7.50 – 8.00	7.50 – 8.00	7.50 – 8.00

‡For outside state shipment price is 9.00–10.25.

NATURAL GASOLINE

(Note: End point of all grades, not over 375 F. Corrosion test adopted Oct. 1, 1927; A.S.T.M. Method D130-27T; doctor test, July 2, 1928.)

OKLAHOMA

Grade AA, 80-87.9, 90% Recovery	6.75 – 6.875	6.50	6.50
Grade A, 72-79.9, 90% Recovery	6.75 – 6.875	6.50	6.50 – 6.625
Grade BB, 84-92, 85% Recovery	6.375	6.25 – 6.375	6.25
Grade B, 76-83.9, 85% Recovery	6.375	6.25 – 6.375	6.25
Grade C, 80-92, 78% Recovery	6.375	6.25 – 6.375	6.25

NORTH TEXAS (F. o. b. Breckenridge)

Grade AA, 80-87.9, 90% Recovery	6.75 – 6.875	6.50	6.50
Grade A, 72-79.9, 90% Recovery	6.75 – 6.875	6.50	6.50 – 6.625
Grade BB, 84-92, 85% Recovery	6.375	6.25 – 6.375	6.25
Grade B, 76-83.9, 85% Recovery	6.375	6.25 – 6.375	6.25
Grade C, 80-92, 78% Recovery	6.375	6.25 – 6.375	6.25

NORTH LOUISIANA (F. o. b. Monroe District)

Grade AA	†7.00	†6.625	†6.75
Grade BB	†6.625	6.625	†6.50
Grade C	†6.625	6.625	†6.50

CALIFORNIA

75-85, 375-390 e.p. blend	8.00 – 8.50	8.00 – 9.00	8.00 – 9.00

†Prices nominal ††Only one refiner quoting *Quotations only

BURNING OILS

PENNSYLVANIA

	Prices Oct. 21	Prices Oct. 14	Prices Oct. 7
45 w.w. kerosene	6.75 – 7.00	6.625– 6.875	6.50 – 6.75
46 w.w. kerosene	6.875– 7.25	6.75 – 7.125	6.75 – 7.00
47 w.w. kerosene	7.25 – 7.75	7.00 – 7.50	7.00 – 7.50
300 mineral seal	7.00 – 7.25	7.00 – 7.25	7.00 – 7.25

CHICAGO RESALE (F. o. b. Group 3, altho goods may originate elsewhere)

41-43 w.w. kerosene	4.625– 5.00	4.875– 5.25	5.00 – 5.25

OKLAHOMA

41-43 w.w. kerosene	4.75 – 5.25	5.00 – 5.25	5.00 – 5.50
42-44 w.w. kerosene	5.25 – 5.75	5.25 – 5.75	5.25 – 5.75

KANSAS (F. O. B. refinery Kansas destination)

41-43 w.w. kerosene	5.50 – 5.75	5.50 – 6.00	5.50 – 6.00
42-44 w.w. kerosene	5.75 – 6.00	6.00 – 6.125	6.00 – 6.25

NORTH TEXAS

40-42 w.w. kerosene	4.25	4.375	4.375– 4.625
41-43 w.w. kerosene	4.375– 4.50	4.50 – 4.625	4.625– 4.75

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

41-43 w.w. kerosene	5.25 – 5.375	5.25 – 5.50	5.25 – 5.50
42-44 w.w. kerosene	5.50 – 5.625	5.50 – 5.625	5.50 – 5.625

ARKANSAS (Ark., N. La. and Miss. destination)

42-44 kerosene	5.50 – 5.625	5.50 – 5.625	5.50 – 5.625

CALIFORNIA

38-40 w.w. kerosene	5.00 – 6.00	5.00 – 6.00	5.00 – 6.00

NEUTRAL OIL

PENNSYLVANIA

Vis.	(Viscosity at 70°F.)		
200 No. 3 Assoc. Filt.	24.00 –27.00	24.00 –27.00	24.00 –27.00
180 No. 3 Assoc. Filt.	18.50 –21.50	18.50 –21.50	19.00 –21.50
150 No. 3 Assoc. Filt.	15.00 –18.00	15.00 –18.00	15.50 –18.00
	(Non Viscous)		
34 Grav. 330-340 Flash	7.375– 7.75	7.375– 7.75	7.375– 7.75

****OKLAHOMA**

Vis. Color	(Viscosity at 100°F.)		
100—No. 2	6.00 – 7.00	6.00 – 7.00	6.00 – 7.00
150—No. 3	7.50 – 8.25	7.50 – 8.25	7.50 – 8.25
150—No. 4	6.75 – 7.50	6.75 – 7.50	6.75 – 7.50
180—No. 3	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
180—No. 4	8.75 – 9.25	8.75 – 9.25	8.75 – 9.25
180—No. 5	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
200—No. 3	9.50 –11.00	9.50 –11.00	9.50 –11.00
200—No. 4	9.00 –10.00	9.00 –10.00	9.00 –10.00
200—No. 5	8.75 – 9.50	8.75 – 9.50	8.75 – 9.50
220—No. 3	12.50 –13.50	12.50 –13.50	12.50 –13.50
220—No. 4	12.00 –12.50	12.00 –12.50	12.00 –12.50
220—No. 5	11.00 –12.00	11.00 –12.00	11.00 –12.00
240—No. 3	13.00 –13.50	13.00 –13.50	13.00 –13.50
240—No. 4	12.00 –13.00	12.00 –13.00	12.00 –13.00
240—No. 5	11.00 –13.00	11.00 –13.00	11.00 –13.00
280—No. 3	14.00 –16.00	14.00 –16.00	14.00 –16.00
280—No. 4	13.00 –15.00	13.00 –15.00	13.00 –15.00
280—No. 5	12.00 –14.00	12.00 –14.00	12.00 –14.00

****Represents both sales and quotations.**

Refinery Markets Wax, Lubricants, Heavy Oil

Prices given below are in cents per gallon, F. O. B. refinery except where $ is shown

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

GULF COASTAL

Vis.	Color	Prices Oct. 21	Prices Oct. 14	Prices Oct. 7
		(Viscosity at 100°F., pour test 0)		
100	No. 2 Pale	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
200	No. 3 Pale	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
300	No. 3 Pale	10.00 –10.50	10.00 –10.50	10.00 –10.50
500	No. 3½ Pale	11.00 –11.50	11.50 –12.00	11.50 –12.00
750	No. 4 Pale	12.00 –12.50	12.50 –13.00	12.50 –13.00
200	No. 5½ Red Oil	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
300	No. 5½ Red Oil	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
500	No. 6 Red Oil	9.50 –10.00	10.00 –10.50	10.00 –10.50
750	No. 6 Red Oil	11.00 –11.50	11.50 –12.00	11.50 –12.00

CALIFORNIA

Vis.	Color		(Viscosity at 100°F.)	
100	No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
200	No. 3	11.50	11.50	11.50
300	No. 3	13.00	13.00	13.00
450	No. 3	15.50	15.50	15.50
550	No. 3	16.50	16.50	16.50
600	No. 3	17.00	17.00	17.00
200	No. 5	11.00	11.00	11.00
300	No. 5	12.00	12.00	12.00
400	No. 5	14.00	14.00	14.00
500	No. 5	15.00	15.00	15.00
600	No. 5	16.00	16.00	16.00
700	No. 7	18.00	18.00	18.00

CYLINDER STOCKS

**OKLAHOMA

190-200 Vis. D at 210° Brt. St.	40.00 –42.00	40.00 –42.00	40.00 –42.00
150-160 Vis. D at 210° Brt. St.	37.00 –38.00	37.00 –38.00	37.00 –38.00
150-160 Vis. E 210° Brt. St.	34.00 –35.00	34.00 –35.00	33.00 –35.00
600 St. Ref. Olive Green	10.00 –13.00	10.00 –14.00	10.00 –14.00
600 St. Ref. Dark Green	9.50 –12.00	10.00 –13.00	10.00 –13.00
Black Oil	5.00	5.00	5.00

PENNSYLVANIA (A. S. T. M. Tests)

600 Steam Refined, filterable	27.00 –29.00	27.00 –29.00	27.00 –29.00
550 Steam Refined	29.00 –32.00	29.00 –32.00	30.00 –32.00
600 Flash	31.00 –33.00	31.00 –33.00	30.00 –33.00
625 Flash	35.00 –37.00	35.00 –37.00	35.00 –37.00
600 Warren E	32.50	32.50	32.50
600 Oil City E	31.00 –32.00	31.00 –32.00	31.00 –32.00
500 D Filtered	36.50 –37.00	36.50 –37.00	36.50 –37.00
Cold Test Stock, 40-50p. p., 140-150 vis. at 210° 540-550 flash, No. 8 color	51.00 –53.00	52.00 –53.00	53.00 –53.50
40-50 p.p., 140-150 vis. at 210°, 540-550 flash, No. 6-6½ color diluted	50.00 –51.00	50.00 –51.00	††50.00

WAX

PENNSYLVANIA (Per pound, New York)

122-124 white crude scale, a.m.p.	3.25 – 3.50	3.25 – 3.375	3.125– 3.25
124-126 white crude scale, a.m.p.	3.25 – 3.50	3.25 – 3.375	3.25

OKLAHOMA

124-126 White Crude Scale, a. m. p.	3.00	2.875– 3.00	2.75 – 3.00

CALIFORNIA

White crude scale, per pound, ton lots, a.m.p.	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50

DISTILLATE, GAS AND FUEL OIL

PENNSYLVANIA (For outside Pittsburgh district)

36-40 fuel oil	4.75 – 5.00	4.625– 5.00	4.50 – 4.75
30-34 fuel oil	4.375– 4.50	4.375	4.25 – 4.375
28-32 fuel oil	4.375– 4.50	4.375	4.25 – 4.375

†Prices Nominal ††Only One Refiner Quoting *Quotations only

CHICAGO RESALE (F. o. b. Group 3, altho goods may originate elsewhere)

	Prices Oct 21	Prices Oct. 14	Prices Oct. 7
38-40 straw distillate	3.875– 4.00	4.00 – 4.125	4.00
32-36 ordinary dark gas oil	2.875– 3.00	2.75 – 3.00	2.75 – 2.875
32-36 dark zero gas oil	3.00 – 3.25	3.00 – 3.25	3.00 – 3.125
32-36 straw zero gas oil	†3.125– 3.375	†3.25 – 3.375	†3.125– 3.25
28-30 zero fuel oil	†$1.10 –$1.20	†$1.10 –$1.20	†$1.075–$1.10
28-30 fuel oil	$1.025–$1.075	$1.025–$1.075	$1.00 –$1.05
24-26 fuel oil	$0.80 –$0.825	$0.80 –$0.825	$0.80 –$0.825
18-22 fuel oil, low sulfur	$0.625–$0.675	$0.625–$0.675	$0.625–$0.65
18-22 fuel oil, high sulfur	$0.65 –$0.70	$0.65 –$0.675	$0.625–$0.675

OKLAHOMA

38-40 straw distillate	4.00 – 4.125	4.00 – 4.25	4.00 – 4.25
36-38 straw distillate	3.75 – 3.875	3.875– 4.00	3.75 – 4.00
32-36 straw gas oil	3.00 – 3.125	3.00 – 3.125	3.00
32-36 dark gas oil	3.00 – 3.125	3.00	2.875– 3.00
32-36 straw zero gas oil	3.25	3.25	3.125– 3.25
32-36 dark zero gas oil	3.125– 3.25	3.125– 3.25	3.00 – 3.125
28-30 zero fuel oil	$1.15 – 1.20	$1.10 – 1.15	$1.075– 1.15
28-30 fuel oil (in bbls.)	$1.075– 1.10	1.05 – 1.10	$1.05
26-28 fuel oil (in bbls.)	$0.875– 0.925	$0.875– 0.90	$0.875– 0.90
24-26 fuel oil (in bbls.)	$0.85 – 0.90	$0.825– 0.90	$0.825– 0.90
22-26 fuel oil (in bbls.)	$0.725– 0.825	$0.70 – 0.825	$0.70 – 0.80
18-22 fuel oil (in bbls.)	$0.65 – 0.725	$0.65 – 0.70	$0.65 – 0.70
‡16-20 fuel oil (in bbls.)	$0.60 – 0.70	$0.575– 0.60	$0.575– 0.60
14-16 fuel oil (in bbls.)	$0.575– 0.70	$0.55 – 0.60	$0.55 – 0.60

‡Gravity changed from 16-18 to 16-20, Aug. 19.

KANSAS (F. O. B. refinery Kansas destination)

38-40 straw distillate	4.25	4.25	4.25
36-38 straw distillate	4.00 – 4.125	4.00 – 4.25	4.00 – 4.25
32-36 gas oil	3.25	3.25	3.25
18-22 fuel oil	$0.70 – 0.75	$0.70 – 0.75	$0.70 – 0.75
10-14 fuel oil	$0.625– 0.70	$0.65 – 0.70	$0.65 – 0.675

NORTH TEXAS

38-40 straw distillate	3.75 – 4.00	3.875– 4.00	3.875– 4.00
32-36 gas oil, cracked	2.75	2.625	2.625
32-36 St. reduced gas oil	2.75 – 2.875	2.75	2.75
24-26 fuel oil (in bbls.)	$0.675– 0.70	$0.65 – 0.70	$0.65 – 0.675
20-24 fuel oil	$0.625– 0.65	$0.625– 0.65	$0.625– 0.65
18-22 fuel oil	$0.60	$0.60	$0.575– 0.60

**WEST TEXAS (F.o.b. West Texas refinery, for unrestricted shipment)

34-38 gas oil	3.00 – 3.25	3.00 – 3.25	3.00 – 3.25
28-30 zero gas oil	3.25	3.25	3.25
18-22 fuel oil	$0.55 – 0.65	$0.55 – 0.65	$0.55 – 0.65

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

32-36 gas oil, dark	3.50 – 3.625	3.50	3.50
32-36 gas oil, straw	3.50 – 3.625	3.50	3.50
14-16 fuel oil (in bbls.)	$0.80	$0.75 – 0.80	$0.70 – 0.80

ARKANSAS (Ark., N. La. and Miss. destination)

32-36 gas oil, straw	3.50 – 3.625	3.50	3.50
32-36 dark gas oil	3.50 – 3.625	3.50	3.50
28-30 gas oil	3.125– 3.25	3.125– 3.25	3.00 – 3.25
14-16 fuel oil	$0.80	$0.75 – 0.80	$0.70 – 0.80

CALIFORNIA (F. o. b. San Joaquin Valley. At San Francisco 4c per bbl. more)

14-18 fuel oil (per bbl.)	$0.45 –$0.60	$0.45 –$0.60	$0.45 –$0.60
14-18 Bunker oil (per bbl.)	$0.70 –$0.75	$0.70 –$0.75	$0.70 –$0.75
30-34 gas oil (per bbl.)	$0.85 –$0.90	$0.80 –$0.90	$0.80 –$0.90
27 Plus Diesel oil (per bbl.)	$0.85 –$0.90	$0.80 –$0.90	$0.80 –$0.90

PETROLATUMS

PENNSYLVANIA (In barrels, carload lots, f. o. b. refinery. In tank cars ½c to ¾c per pound less.) Two refiners quoting.

Snow White	8.50 – 8.75	8.50 – 8.75	8.50 – 8.75
Lily White	7.75	7.75	7.75
Cream White	6.75	6.75	6.75
Light Amber	3.75	3.75	3.75
Amber	3.50	3.50	3.50
Red	3.25	3.25	3.25

PETROLEUM COKE

**OKLAHOMA

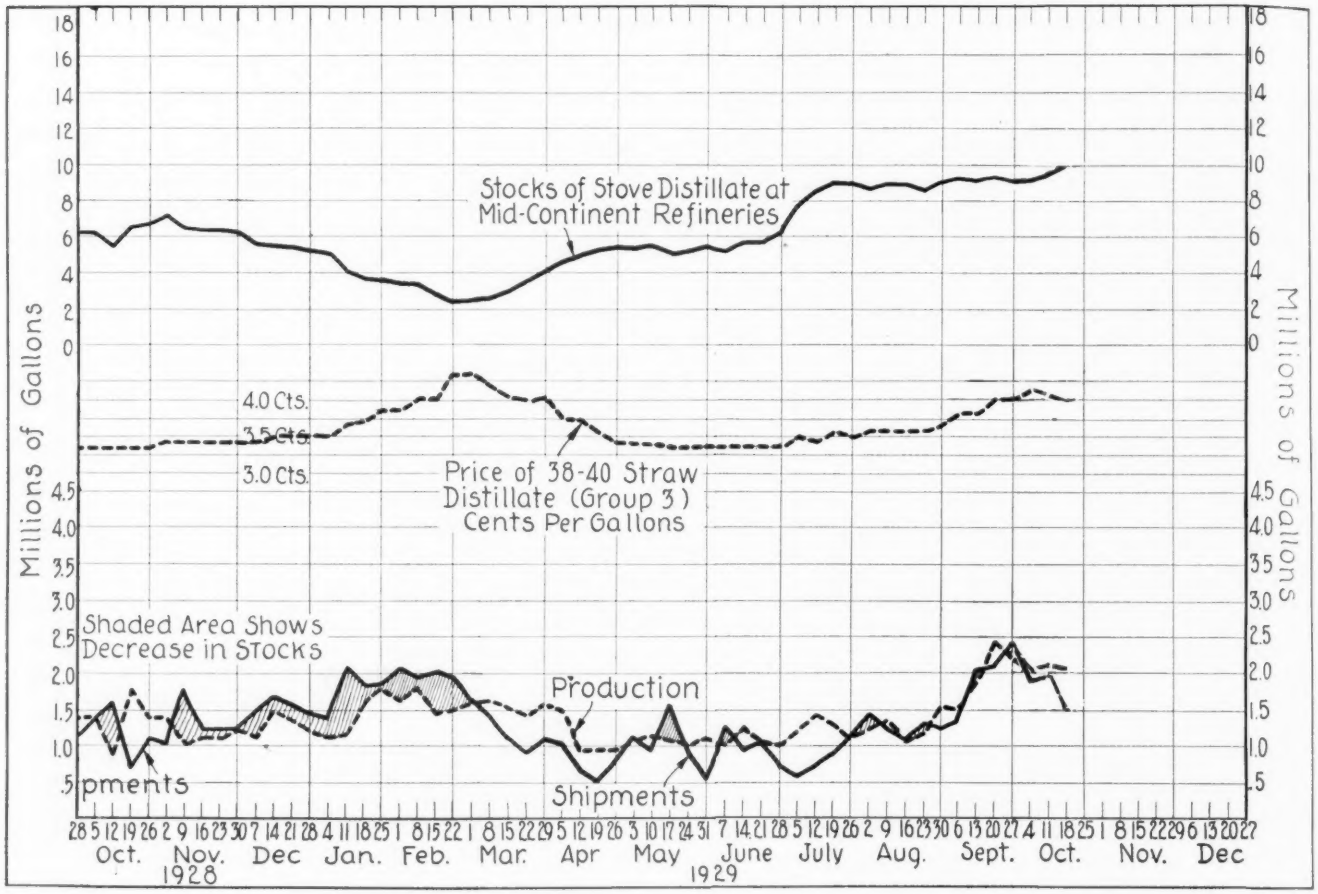
(Per ton in car lots)

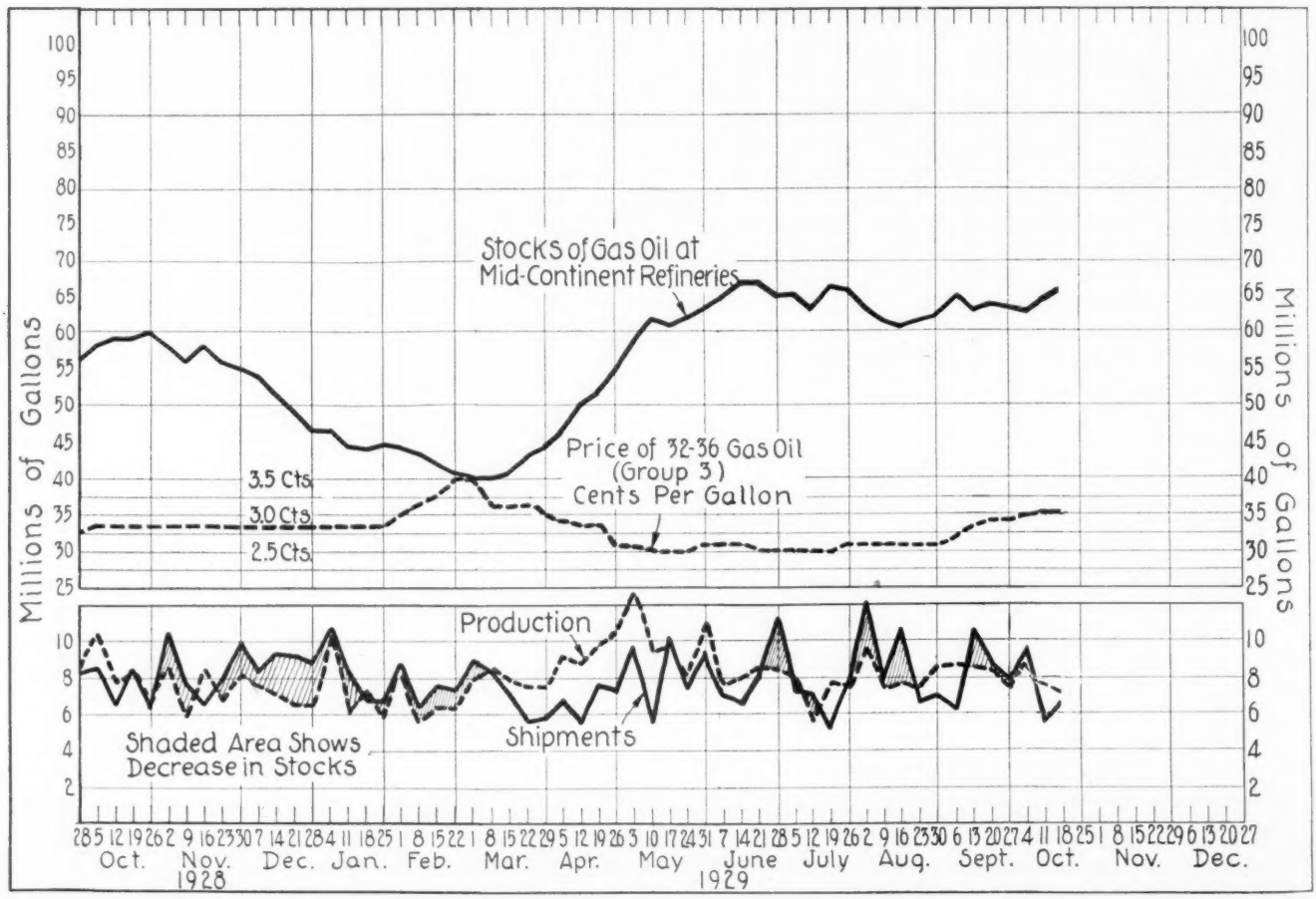
Lump	$4.50 – 5.00	$4.50 – 5.00	$4.50 – 5.00
Still run	$3.00	$3.00	$3.00
Breeze	$2.00	$2.00	$2.00

**Represents both sales and quotations

Barometer of Mid-Continent Refinery Market—Week Ending October 18

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News


Millions of Gallons
Stocks of Stove Distillate at Mid-Continent Refineries
4.0 Cts.
3.5 Cts.
3.0 Cts.
Price of 38-40 Straw Distillate (Group 3) Cents Per Gallons
Shaded Area Shows Decrease in Stocks
Production
Shipments
Oct. Nov. Dec Jan. Feb. Mar Apr May June July Aug. Sept. Oct. Nov. Dec
1928
1929


Millions of Gallons
Stocks of Gas Oil at Mid-Continent Refineries
3.5 Cts.
3.0 Cts.
2.5 Cts.
Price of 32-36 Gas Oil (Group 3) Cents Per Gallon
Production
Shipments
Shaded Area Shows Decrease in Stocks
Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
1928
1929

L. V. NICHOLAS

Buying — Selling — Re-organizing — Re-financing — of oil jobbing and service station properties.

Consultation and advisory service in the formulation of expansion programs or policies.

Buying commissions and expansion programs executed and directed for companies with formulated plans.

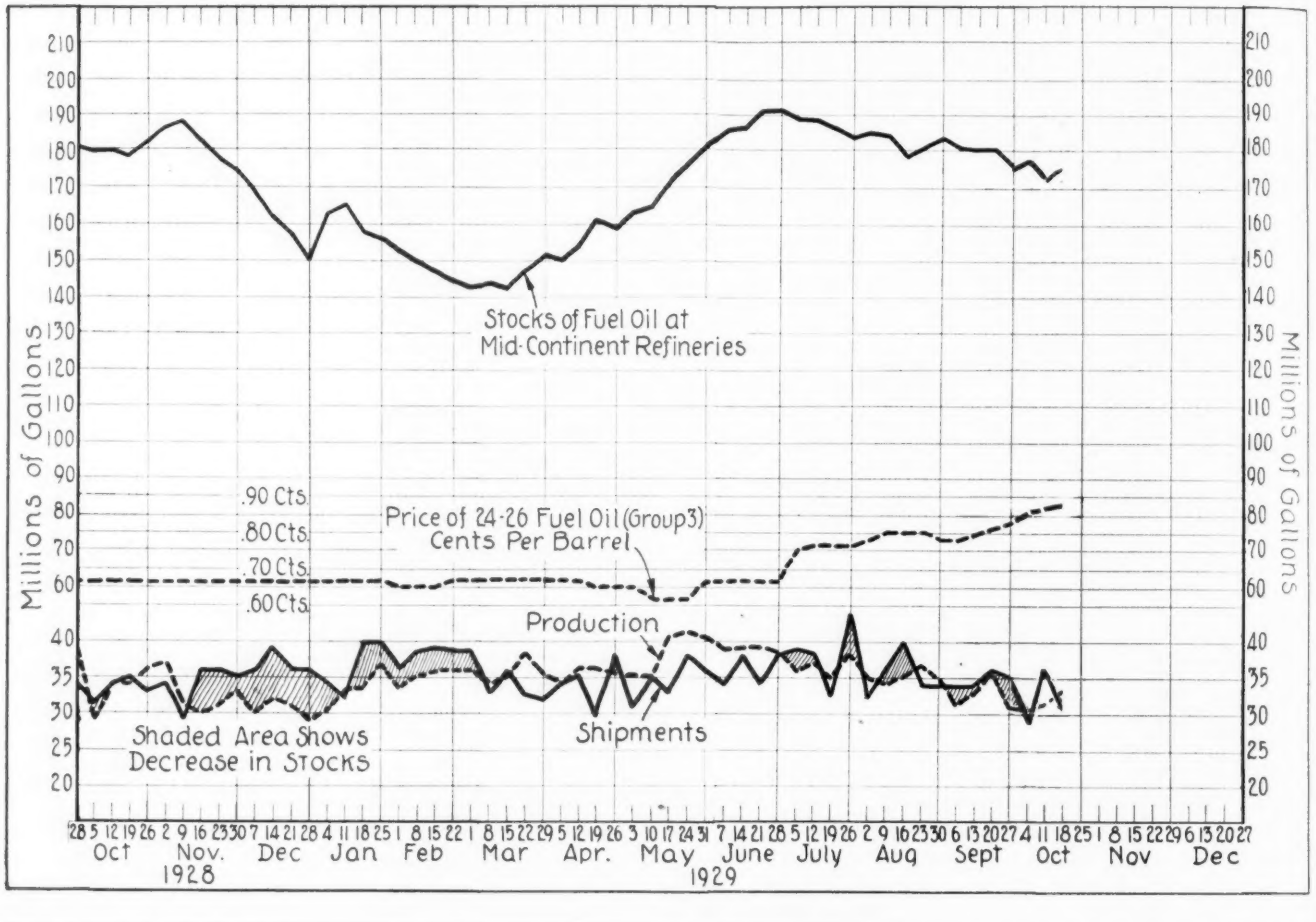
There is no single formula to meet all situations—every problem should have careful study and personal analysis.

Correspondence Solicited

L. V. NICHOLAS, 624 So. Michigan Ave.
Chicago, Illinois

Barometer of Mid-Continent Refinery Market—Week Ending October 18

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News


Millions of Gallons
Millions of Gallons
Stocks of Fuel Oil at Mid-Continent Refineries
.90 Cts.
.80 Cts.
.70 Cts.
.60 Cts.
Price of 24-26 Fuel Oil (Group 3) Cents Per Barrel
Production
Shipments
Shaded Area Shows Decrease in Stocks
Oct Nov. Dec Jan Feb Mar Apr. May June July Aug Sept Oct Nov Dec
1928
1929

California Refinery Market

Distress Goods Appear on West Coast

LOS ANGELES, Oct. 17.

INCREASING stocks and no apparent let up in the production of crude oil has been the source of considerable alarm to California refiners, especially since court delays threaten to hold up curtailment which had been hoped for from the state gas conservation law.

From the rumors prevailing in marketing circles it may be deducted that unless a substantial reduction is secured in the daily output of California crude the price structure is due for a radical change. Cuts in crude and gasoline have been predicted freely on all sides and any addition to the already overloaded storage will precipitate matters.

Although it has been reported that a combine of large interests has contracted to deliver a number of cargoes of United States Motor to eastern buyers at 6 cents per gallon no confirmation could be made up to time of this writing.

It also has been reported that a cargo of gas-oil was sold at $0.84 per barrel. This price is slightly higher than an independent refiner was reported to have been offered for a cargo of this commodity by a consumer on the eastern seaboard.

High tanker rates have prevented a possible solution of the California export problem by continuing to range at high levels.

Relief from the accumulation of fuel oils was hoped for by local marketers from a large inquiry offering $0.60 per barrel for this commodity. Up to the present time the refiner reporting the offer has held off for a higher price but an overabundance of fuel oil in the California market is likely to cause him to unload within the coming week.

Tank car sales in the California domestic market for shipment within the state were numerous the past week although some commodities showed little activity. Here again it was indicated that unless the offerings of petroleum products decreased there will be cuts in all branches.

Out of state gasoline moved for as low as 7.125 cents with quotations ranging from 7.25 to 8.25 cents per gallon. Gasoline destined to be consumed within the state was active at from 9 to 10.25 cents, without tax. Surplus gasoline from a number of small refineries in the Long Beach field threaten the price structure.

One independent refiner reported selling approximately 125,000 gallons of gasoline daily to large interests in addition to a considerable amount dispensed through service stations. The selling price of the gasoline sold to the above mentioned interests was 10 cents per gallon.

Fuel oil prices showed little chance of being lifted from the low figures they have maintained during the summer. A large number of companies have been reported offering this commodity at $0.50 to $0.55 per barrel from long periods.

Outside of a little activity in natural gasoline, prices for other refinery products were unchanged from those quoted last week.

Pennsylvania Market

Burning Oils Move Higher

CLEVELAND, Oct. 21. — General market conditions were unchanged in western Pennsylvania last week. Kerosene and fuel oil were minor features of the market in that demand for these oils continued at a rate slightly above normal. Demand for other commodities was reported fair to good with price trends somewhat mixed.

More refiners last week joined the ranks of those who previously had reported they would have no more fuel oil to offer for the remainder of October. Scarcity of this commodity has not yet become acute, but offerings in most districts have been extremely light. Fuel oil, 36-40 gravity, at 4.625 cents was eliminated from the market and the low price quoted for this grade Oct. 19 was 4.75 cents. Several companies reported they had booked a large volume of orders at 5 cents.

Demand for 45 water white kerosene also was sufficiently good to eliminate the 6.50 and 6.625-cent goods offered in some districts during the early part of last week. The low price for this commodity stood at 6.75 cents Oct. 19; one or two refiners reported sales at 7 cents.

Prices for bright stock were reduced 0.5 to 1 cent per gallon by refiners in at least one district. The efforts of large buyers to batter down prices in the district which supplies the largest volume of bright stock, however, proved futile, according to reports.

There was an exceptionally good demand for wax from eastern seaboard resale agents and prices for both the 122-124 and 124-125 A.m.p. grades moved up 0.125 to 0.25 cent a pound.

Prices for gasoline, neutral oils and cylinder stocks showed little change. A fair market was reported for all of these commodities.

Ads Appeal to Civic Pride

NEW YORK, Oct. 19.—Advertisements in newspapers outside of New York City, in which the Standard Oil Co. of New Jersey refers to itself as a home industry, have been run recently by that company. One of these was reprinted in a September issue of "Printers' Ink" in the ad of a Baltimore newspaper, in which the Standard was quoted as referring to Baltimore as Maryland's "Cinderella" which had become its fairy princess.

How that city grew from 25 houses in 1752 to become the seventh industrial city of the country having the second finest harbor on this side of the Atlantic, is told in this advertisement.

The Standard's 32,000 barrel refinery there furnishes employment to hundreds and people are asked to favor a home industry by patronizing the Standard service stations.

8000 GALLONS

delivered today... and we know where every dime's worth went!

When you were here six months ago, Jack, I couldn't have said that. Gallon after gallon got away unaccounted for—and you know what our chances were of getting paid for them when we didn't know where the charge belonged. Now, not a drop comes out of those tanks that doesn't come through a Niagara Meter—and the Niagara never overlooks making a record. Since we started metering, we don't have any losses through carelessness, oversight, or just plain theft.

The Niagara Meter is Dependable

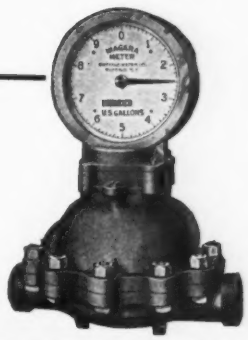
Storage tank fillings and truck loadings are meter-measured throughout the country by progressive retailers and wholesalers. Tank-car fillings and deliveries, tank transferals, drum fillings—all are checked and totaled automatically, without fire hazard and without loss of time.

Niagara Oil Meters will give *you* the same control over elements that influence your profits. Niagaras will enable *you* to know definitely, when and to whom oil and gasoline is delivered—and how much. They will put you in position to know precisely the amounts of oil or gasoline that are delivered to you—and how much you have on hand. They will eliminate your "unaccounted-for" losses that eat into earnings because of uncertain measuring methods.

There are Niagara Oil Meters for every purpose to which you might wish to put them. The coupon below will bring you the new catalog, promptly.

BUFFALO METER COMPANY
2889 Main Street
Buffalo, New York

Niagara Meters



BUFFALO METER COMPANY, 2889 Main St., Buffalo, N. Y.
Please mail copy of the Niagara Meter Catalog. If you have special information regarding the dependable metering of.....
....., please include it.
Name.....
Type of business.....
Address.....

Eastern Domestic Markets

Gasoline Quotations Are Unchanged

Staff Special
NEW YORK, Oct. 19

LITTLE of interest occurred in Eastern markets the past week. Jobbers ordered gasoline in all districts only on a hand-to-mouth basis. Prices were unchanged. There also were no changes in kerosene prices although demand has been much better, the trade reported.

The weather during the forepart of the week was a great factor in gasoline sales. Rain fell at several points on the seaboard Monday which turned to a slight fall of snow and sent the mercury hi-balling for the bulb. At New York and more northern points temperatures hovered around the freezing point until Thursday. The remainder of the week was blessed with sunshine which pepped up the market somewhat.

At New York U. S. Motor gasoline was being quoted at 8.75 to 9 cents. Two sellers still were talking advancing quotations although nothing resulted. The trade generally felt that the market was in good position and there was shading reported only in one instance. The amount of that shading was small and in no way affected the price quoted by other sellers.

It was the subject of conversation among buyers however. In one instance a barge customer of a leading refiner claimed he could buy for 8.625 cents naming the company which was quoting that price. Later the same day he came back to the other refiner and paid 8.75 cents.

The close of the week found Philadelphia sellers believing that low prices were no longer existing in that district. Two weeks ago there were reports of one company selling at 8.75 which was 0.25 below the general price. Those reports continued until the latter part of the past week. One seller in the district who was short some material, reported he had to pay 8.75 cents for resale for a barge load on Friday, and that he had shopped the market thoroughly before making the purchase.

New England markets were unchanged from the week prior. While quotations were at the levels reached through the advance of two weeks ago, business was not brisk.

At other points on the seaboard prices were holding at 9 cents and there were no reports of shading.

California gasoline prices maintained the levels of a week ago which were, 9 cents at New York and Philadelphia, and 9 to 9.25 cents at Baltimore. At the latter point sellers have been able to obtain 9.25 cents for nearby shipment but have been forced to sell at 9 cents at more distant points.

Some reports were heard that gasoline was being quoted higher on the coast as stocks were now at a favorable level. The general opinion of the market in California was 6.50 cents, but some ideas were as high as 7 cents. One seller at New York reported that, due to the apparent increase in prices in the field, he was thinking of raising his price in the East. There had been no change Saturday, however.

The tanker market has been a large factor in the distribution of California gasoline on the east coast and, of course, a large factor in spot sales made on the west coast. Clean boats for inter-coastal movement were higher again at the close of the week, the new rate being approximately 2.25 cents per gallon. For the eastern distributor to make a profit at 9 cents, which he would have to sell for, that transportation charge would enable him to pay no more than 6.25 cents f.o.b. California ports.

And the general outlook on the tanker market was, "there is no indication of it getting easier in the near future." Three eastern concerns were reported seeking clean boats either for prompt chartering or for contract over a year's time, but have been unable to find one reasonably quoted. One clean bottom was said to be available but the owner would charter for nothing less than $1.00 over next year, and $1.15 for prompt movement.

Gulf Coast Markets

Gasoline Cargo Sold; Inquiry Better

Staff Special
NEW YORK, Oct. 19

THE monotony of bulk markets at the Gulf which has existed for several weeks was broken during the week just passed. A part cargo was sold to a French account and two inquiries were circulated through the market, one which was believed placed abroad and another on which details could not be learned. There were no changes in prices for any commodities.

The part cargo was sold around the middle of the week but was not made public until the latter part. It consisted of approximately 50,000 barrels of U. S. Motor and 64-66, 375 end point gasoline for lifting about the middle of November. Negotiations were completed at prices posted by the Export Petroleum Association. It moved to a subsidiary of a leading United States refiner.

Friday it was reported that another French buyer was seeking a cargo of 50,000 barrels of U. S. Motor and 64-66, 375 end point gasoline—equal amounts of each commodity—for prompt shipment. Saturday the report was heard that the business had been placed on the other side and under prices posted by the association of 8.50 cents for U. S. Motor and 10 cents for the other commodity.

It was impossible to learn if the sale had been made in the Black Sea district as was reported. However, several of the trade believed the account the same one which was in the market about two weeks ago for a similar cargo and which, it was then reported, was negotiating with a Tulsa broker to place the business under association prices.

As in the case of waxes, Roumanian lubricants are a great factor in the export activities of American refiners of lube oils. On the other side, it was reported, these refiners make a pale oil that compares in price with U. S. refiners' red oils. Naturally French and English purchasers take advantage of those prices and buy in that district. One English buyer is reported to have said that he has bought no lube oils from United States refiners for the past two years.

Prices for all commodities which move from the Gulf for domestic were unchanged. U. S. Motor was quoted at 7.50 cents with one buyer believing he could shade that figure. There were no actual sales however, on which to base prices.

Kerosene was being quoted at 6.375 to 6.50 cents and gas oil at 4 to 4.125 cents. Despite a slight decline last week in field prices several sellers of kerosene expected a gradual advance in prices.

Wax Markets

White Scale Inquiries Brisk

NEW YORK, Oct. 19.—Buying of scale waxes which was a feature of the market a week ago had dwindled down to some extent at the close of last week and, as a result, prices were unchanged. Some business was done in fully refined goods but not enough to cause a general fluctuation of prices.

Numerous sales and inquiries were reported by the trade for scale waxes at the opening of the week. Most of them were for small lots and principally for shipment to domestic users although a fair portion moved for export.

Prices governing sales were from 3.375 to 3.50 cents, although one sale of 20 tons of white scale for domestic shipment was reported at 3.625 cents. Another 50 tons was sold for domestic early in the week at 3.50 cents. Two shipments were made to England of 50 tons each, both sales being quoted on a c.i.f. basis, which figured about 3.40 cents f.a.s. New York. Two other orders of white scale moved for export, each for 50 tons, one for 3.375 cents and the other at 3.50 cents. The lower-priced sale was made Friday.

The trade generally, reported that numerous inquiries for scale goods, principally white, were received but only a few in comparison resulted in sales. One seller who has disposed of the greater portion of his production for the next three months, reported that he was "literally flooded with inquiries."

They were "from all parts of the country" and ranged in amounts from 50 to 200 tons. Most of them originated in the United Kingdom however, this seller said. He tried to cover on several of the orders through brokers but said the goods was not available.

Of greatest importance was an inquiry he received for 100 tons of white scale for prompt shipment to the Far East. It was the first order from that section this year and he believed it to be a forerunner of active buying from Far East consumers.

High Viscosity Lubes Lower

HOUSTON, Oct. 21.—Prices generally are unchanged in the Gulf Coastal lubricant markets, although there has been some shading on the competitive high viscosity grades. Where reductions have been made, they have usually amounted to about 0.50 cent per gallon, affecting the 500 and 750 viscosity grades. Demand shows some increase, manufacturers report, from domestic jobber territories where zero cold test lubricants fit in with winter requirements.

Gasoline and Oil Filling Stations

and Steel Buildings

We manufacture the simplest to the most elaborate Stations. Put your own individuality in your Filling Stations—Let us help you work this out.

The Edwards Manufacturing Co.

524-544 Eggleston Ave. **Cincinnati, Ohio**

"What About The OILGRAM?"

—asked the executive of a gasoline company on the west coast recently of a Tulsa oil man. His answer was . . .

"If you were to wire me for Mid-Continent gasoline prices today, I would phone a member of the OILGRAM staff, and my reply to you would be the *gist of what he told me.* The OILGRAM staff is in direct and close contact with the markets almost every hour of the business day. *They know their business.*"

You too, can have the benefit of this close contact with all phases of the market at all the principal refining and marketing centers.

The service costs only $25 a quarter, or $75 a year, payable in advance. Approximately 30 cents a day—less than the cost of one wire or one phone call.

Avail yourself of this fast, daily market service today—send your order with check to the nearest mailing point.

TULSA—904 World Bldg.

CHICAGO—35 East Wacker Drive

NEW YORK—342 Madison Avenue

CLEVELAND—1213 West Third St.

Complete Seaboard Market

(Export Markets for whole year given in OIL PRICE HANDBOOK. Each volume carries refinery, tank wagon, crude and export markets—complete for the whole year)

Eastern Domestic Market

(Prices for tank car lots, f. o. b. refinery or seaboard terminal, representing majority of quotations.)

	Oct. 21	Oct. 14	Oct. 7
U. S. MOTOR GASOLINE			
New York harbor	8.75 – 9.00	8.75 – 9.00	8.75 – 9.00
Portland district	*11.00	*11.00	*11.00
Boston district	*10.50	*10.50	*10.50
Providence district	*10.50	*10.50	*10.50
Philadelphia district	9.00	9.00	9.00
Baltimore district	9.00	9.00	9.00
Norfolk district	9.00	9.00	9.00
Charleston district	9.00	9.00	9.00
Savannah district	9.00	9.00	9.00
Jacksonville district	9.00	9.00	9.00
CALIFORNIA, U. S. MOTOR GASOLINE			
New York harbor	9.00	9.00	9.00 – 9.25
Philadelphia district	9.00	9.00	9.00
Baltimore district	9.00 – 9.25	9.00 – 9.25	9.00 – 9.25
WATER WHITE KEROSENE			
New York harbor	7.75	7.75	7.75
Philadelphia district	7.75	7.75	7.75
Baltimore district	7.75	7.75	7.75
GAS OIL: 28-34 Gravity			
New York harbor	4.75	4.75	4.75
Boston district	4.75	4.75	4.75
FURNACE OIL: 36-40 Gravity			
New York harbor	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
Boston district	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
GRADE C BUNKER OIL†			
New York harbor	$1.05	$1.05	$1.05
Boston district	$1.05	$1.05	$1.05
DIESEL OIL			
New York harbor	$2.00 –$2.10	$2.00 –$2.10	$2.00 –$2.10
MEDICINAL OILS, RUSSIAN			
.885-890 s.g. 320-330 vis.	$0.82 – 0.97	$0.82 – 0.97	$0.82 – 0.97
.870-875 s.g. 145-155 vis.	$0.74 – 0.89	$0.74 – 0.89	$0.74 – 0.89

Note: Above gasoline prices do not include inspection tax levied in some states *Nominal and Minimum delivered. **Delivered prices. †Lighterage 5c per bbl. additional.

New York Export Market

(Lubricating oils are per gal. in bbls.)

	Oct. 21	Oct. 14	Oct. 7
CYLINDER OILS (Pennsylvania Products)			
Bright stock, dark	57.00 –60.00	57.00 –60.00	57.00 –59.00
600 D filtered	45.00 –46.00	41.00 –46.00	41.00 –44.00
600 Warren E filtered	40.00 –41.00	40.00 –41.00	40.00 –41.00
600 s.r. unfiltered	32.00 –35.00	31.00 –33.00	31.00 –33.00
650 s.r. unfiltered	37.00 –39.00	37.00 –38.00	36.00 –38.00
600 flash, s.r.	39.00 –41.00	39.00 –41.00	38.00 –40.00
630 flash, s.r.	43.00 –45.00	43.00 –45.00	42.00 –44.00
RED ENGINE OILS (Vis. 100°)			
300 vis. No. 6½ color	20.00 –21.00	20.00 –21.00	20.00 –21.00
250 vis. No. 6 color	18.00 –20.00	18.00 –20.00	18.00 –20.00
200 vis. No. 6 color	16.00 –17.00	16.00 –17.00	16.00 –17.00
PALE ENGINE OILS (Vis. 100°)			
230 vis. No. 3¾ color	21.00 –22.00	21.00 –22.00	20.00 –21.00
180 vis. No. 3¼ color	17.00 –18.00	17.00 –18.00	17.00
100 vis. No. 2¼ color	16.00	16.00	16.00
MOTOR OILS (Vis 100°)			
600 vis. No. 7 color	30.00 –32.00	30.00 –32.00	33.00 –34.00
500 vis. No. 6½ color	28.00 –29.00	28.00 –29.00	31.00
400 vis. No. 7¼ color	26.00 –27.00	26.00 –27.00	30.00
300 vis. No. 6 color	23.00 –24.00	23.00 –24.00	23.00 –25.00
200 vis. No. 6 color	21.00 –22.00	21.00 –22.00	20.00 –22.00
MEDICINAL OILS			
.875-880 s.g.	$0.76 – 0.91	$0.76 – 0.91	$0.76 – 0.91
.860-.865 s.g.	$0.58 – 0.73	$0.58 – 0.73	$0.58 – 0.73
WAXES (In cents per pound, f.a.s. carload lots)			
WHITE CRUDE SCALE (In barrels)			
122-124 A.m.p.	3.375– 3.50	3.375– 3.50	3.125– 3.25
124-126 A.m.p.	3.375– 3.50	3.375– 3.50	3.125– 3.25
FULLY REFINED (In burlap bags)			
123-125 A.m.p. Phila.	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
125-127 A.m.p.	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
128-130 A.m.p.	4.25 – 4.50	4.25 – 4.50	4.25 – 4.50
130-132 A.m.p.	5.00 – 5.25	5.25 – 5.50	5.25 – 5.50
133-135 A.m.p.	6.00	6.00	6.00
135-137 A.m.p.	6.25	6.25	6.25
YELLOW CRUDE SCALE			
124-126 A.m.p.	3.25 – 3.375	3.25 – 3.375	3.00 – 3.125

Gulf Export Market

(Prices are f. o. b. Gulf oil terminals in Texas and Louisiana, shipments of 20,000 bbls. or more unless otherwise noted and for export shipment only).

	Oct. 21	Oct. 14	Oct. 7
GASOLINE			
U. S. Motor	8.50	8.50	8.50
60-62, 400 e.p.	9.50	9.50	9.50
61-63, 390 e.p.	9.75	9.75	9.75
64-66, 375 e.p.	10.00	10.00	10.00
U. S. Motor, cases (cargoes)	$1.85	$1.85	$1.85
64-66, cases (cargoes)	$2.00	$2.00	$2.00
KEROSENE			
44 water white	8.00	8.00	8.00
41-43 prime white	7.00	7.00	7.00
Water white, cases (cargoes)	$1.80	$1.80	$1.80
Prime white, cases (cargoes)	$1.70	$1.70	$1.70
DOMESTIC GAS & BUNKER OILS			
*26-30 translucent gas oil	4.00	4.00	4.00
*30 plus translucent gas oil	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
Grade C bunker oil	$0.95	$0.95	$0.95
Grade C bunker oil, cargoes	$0.70 –$0.75	$0.70 –$0.75	$0.70 –$0.75
*Less than ½ of 1% sulphur.			
MEXICAN CRUDE AND BUNKER OILS (F. O. B. Steamer, Tampico)			
Heavy Panuco crude taxes to be paid	$0.60 –$0.65	$0.60 –$0.65	$0.60 –$0.65
Grade C bunker oil for bunkering purposes, taxes paid	$0.90 –$0.95	$0.90 –$0.95	$0.90 –$0.95
SOUTH TEXAS LUBRICATING OILS, (Viscosity at 100°F.) (cold test) (Tanker, f. o. b. Houston)			
100 vis. No. 2 unfiltered pale	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
200 vis. No. 3 unfiltered pale	8.25 – 9.00	8.25 – 9.00	8.25 – 9.00
300 vis. No. 3 unfiltered pale	9.75 –10.00	9.75 –10.00	9.75 –10.00
500 vis. No. 3½ unfiltered pale	11.25 –11.50	11.25 –11.50	11.25 –11.50
750 vis. No. 4 unfiltered pale	12.75 –13.00	12.75 –13.00	12.75 –13.00
1200 vis. No. 5 unfiltered pale	16.25 –16.50	16.25 –16.50	16.25 –16.50
200 vis. No. 5-6 red oil	8.00	8.00	8.00
300 vis. No. 5-6 Red oil	8.50	8.50	8.50
500 vis. No. 5-6 red oil	9.25 –10.00	9.25 –10.00	9.25 –10.00
750 vis. No. 5-6 red oil	12.00	12.00	12.00
1200 vis. No. 5-6 red oil	16.25 –16.50	16.25 –16.50	16.25 –16.50

Gulf Domestic Market

(Prices are f.o.b. Gulf oil terminals in Texas and Louisiana in shipment of 20,000 bbls. or more, representing sellers' opinions, for domestic shipment only).

	Oct. 21	Oct. 14	Oct. 7
U. S. Motor gasoline	7.50	7.50	7.50
41-43 w.w. kerosene	6.375– 6.50	6.50 – 6.625	6.50 – 6.625
*26-32 translucent gas oil	4.00 – 4.125	4.00 – 4.125	4.00 – 4.125
*Less than ½ of 1% sulphur.			

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	Oct. 21	Oct. 14	Oct. 7
Gasoline, U. S. Motor, 53-55 Gravity	6.75 – 7.25	6.75 – 7.25	6.75 – 7.25
Gasoline, U. S. Motor-blends and special cuts	7.50 –10.00	7.50 –10.00	7.50 –10.00
Gas Oil, 30-34, per barrel	$0.85 –$1.05	$0.90 –$1.05	$0.90 –$1.05
Diesel Oil, 27 plus, per barrel	$0.85 –$1.00	$0.875–$1.00	$0.875–$1.00
Bunker oil, 14-18, per barrel	$0.70 –$0.85	$0.70 –$0.85	$0.70 –$0.85
Fuel oil, 14-18 per barrel	$0.60 –$0.85	$0.60 –$0.85	$0.60 –$0.85
Kerosene, 38-40 w.w., 125-150 flash, per gal.	5.75 – 6.25	5.75 – 6.25	5.75 – 6.25
Cased Goods			
Gasoline, U. S. Motor	$1.75 –$1.85	$1.75 –$1.85	$1.75 –$1.85
Kerosene, 38-40 w.w., 125, 150 flash	$1.45 –$1.50	$1.45 –$1.50	$1.45 –$1.50

Tanker Rates

(Approximate tanker freight rates to Continental ports, in shillings per ton of 2240 pounds, British sterling; to American ports, cents per barrel.)

	Oct. 21 Crude &/or Fuel	Refined Oil &/or Spirits
Calif. to U. K. or Continental ports*	35	40–42
Gulf to U. K. or Continental ports*	22–23	28
North Atlantic to U. K. or Continental ports*	19–20	26
Calif. to North Atlantic ports (not E. of N. Y.)	$1.00–$1.10	$1.00–$1.05
Gulf to North Atlantic ports (not E. of N. Y.)**	43	42

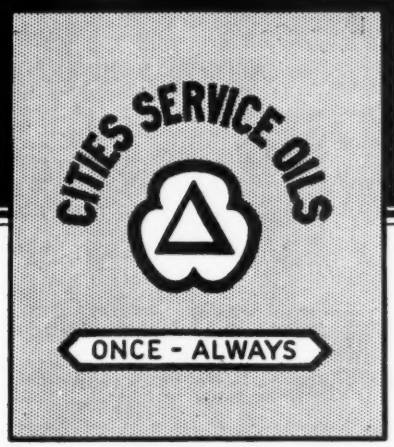
*Continental ports in the range between Bordeaux and Hamburg, both inclusive.

**Venezuela loading same rate. For Tampico 3c per bbl. additional.

Nationally Advertised

. . .

Nationally Accepted



Build your business on our reputation for satisfactory petroleum products

Empire Oil & Refining Company

Subsidiary Cities Service Co.

GENERAL SALES OFFICES — TULSA, OKLA.

NEW YORK PHILADELPHIA CLEVELAND CHICAGO ST. PAUL
KANSAS CITY ST. LOUIS FT. WORTH TORONTO

Tank Wagon Service Station Markets for Gasoline and Kerosene

(OIL PRICE HANDBOOK has t. w. and s. s. markets for a whole year, arranged for quick reference)

These Prices in Effect Oct. 21, 1929, as Posted by Principal Marketing Companies

S.O. NEW JERSEY TERRITORY

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Atlantic City, N. J.	14	2	16	18	13
Newark, N. J.	15	2	17	19	13
Annapolis, Md.	16	4	20	22	13
Baltimore, Md.	15	4	19	21	12
Cumberland, Md.	16	4	20	22	13
Washington, D. C.	15	2	17	19	12
Danville, Va.	16	5	21	23	12
Norfolk, Va.	15	5	20	22	13
Richmond, Va.	15	5	20	22	13
Roanoke, Va.	15	5	20	21	13
Petersburg, Va.	16	5	21	23	13
Charleston, W. Va.	15	4	19	21	13
Keyser, W. Va.	16	4	20	22	13
Parkersburg, W. Va.	15	4	19	21	12
Wheeling, W. Va.	16	4	20	22	13
Charlotte, N. C.	16	5	21	23	13
Hickory, N. C.	16	5	21	23	13
Mt. Airy, N. C.	16	5	21	23	13
Salisbury, N. C.	16	5	21	23	13
Charleston, S. C.	15	6	21	23	13
Columbia, S. C.	16	6	22	24	13

Note: 2c per gallon discount off t.w. price of gasoline to dealers and commercial consumers thru S. O. New Jersey territory.

CONTINENTAL OIL

Denver, Colo.	14	4	18	21	15.5
Pueblo, Colo.	14	4	18	21	15.5
Grand Junc., Colo.	18.5	4	22.5	25.5	19
Casper, Wyo.	16	4	20	23	14
Cheyenne, Wyo.	17	4	21	24	15.5
Butte, Mont.	20.5	5	25.5	28.5	20
Helena, Mont.	20.5	5	25.5	28.5	20
Salt Lake City, Utah	17.5	3½	21	24	17
Boise, Ida.	19.5	4	23.5	26.5	19
Twin Falls, Ida.	19.5	4	23.5	27.5	19
Albuquerque, N. M.	16	5	21	24	17

S. O. CALIFORNIA

Phoenix, Ariz.	14	4	18	22	20.5
Los Angeles, Cal.	16.5	3	19.5	22.5	15.5
Fresno, Cal.	17	3	20	23	17
San Francisco, Cal.	17	3	20	23	15.5
Reno, Nev.	21	4	25	28	19
Portland, Ore.	17.5	3	20.5	23.5	16.5
Seattle, Wash.	17.5	3	20.5	23.5	16.5
Spokane, Wash.	21.5	3	24.5	27.5	20.5
Tacoma, Wash.	17.5	3	20.5	23.5	16.5

Note: 4c per gal. discount to dealers off t.w. price of gasoline to customers taking tank truck delivery, thru S. O. California territory except 1c discount at Phoenix to dealers only.

S. O. LOUISIANA

Little Rock, Ark.	16	5	21	23	13
Alexandria, La.	‡15	4	19	21	†16
Baton Rouge, La.	14	4	18	20	†14.5
Lake Charles, La.	††16.5	4	††20.5	††22.5	†16
New Orleans, La.	*11	4	*15	17	†13
Shreveport, La.	15.5	4	19.5	21.5	†15
Lafayette, La.	**16	4	**20	**22	†14
Bristol, Tenn.	16	5	21	22	14
Chattanooga, Tenn.	15	5	20	22	14
Knoxville, Tenn.	15	5	20	20	16
Nashville, Tenn.	14	5	19	19	16
Memphis, Tenn.	15	5	20	22	12.5

Note: 2c per gallon discount off t.w. price of gasoline to dealers thru S. O. Louisiana territory.

*New Orleans gasoline prices include 1c parish tax in addition to 4c state tax, and kerosene prices include 1c state tax and 1c parish tax.

†Kerosene price in Louisiana includes 1c state tax.

**Lafayette gasoline prices include 1c parish tax in addition to 4c state tax.

††Lake Charles gasoline prices include 1c parish tax

S. O. KENTUCKY

Ashland, Ky.	13	5	18	19	15.5
Catlettsburg, Ky.	13	5	18	19	15.5
Lexington, Ky.	15	5	20	22	15.5
Louisville, Ky.	16	5	21	23	15
Covington, Ky.	16	5	21	22	15.5
Clarksdale, Miss.	13	5	18	20	12.5
Gulfport, Miss.††	17.5	5	22.5	24.5	14
Jackson, Miss.	16	5	21	23	13

Latest Changes in Tank Wagon Prices

Gasoline Changes

Atlantic Refining—T.w. and s.s. cut 1c, Baltimore, Richmond and Wilmington, **Oct. 10.**

Continental Oil—T.w. and s.s. cut 1c, Utah and southern Idaho, **Oct. 17.**

T.w. and s.s. cut 1c, Wyoming, **Oct. 19.**

Magnolia Petroleum—T.w. up 2c, Little Rock, to 21c, including 5c tax, **Sept. 26.**

T.w. and s.s. cut 2c, Little Rock, to 19c and 21c, respectively, including 5c tax, **Oct. 14.**

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Natchez, Miss.	15.5	5	20.5	20.5	14
Vicksburg, Miss.	15.5	5	20.5	22.5	14
Birmingham, Ala.	15	4	19	21	13
Mobile, Ala.‡	16	4	20	22	15
Montgomery, Ala.*	17	4	21	23	16.5
Atlanta, Ga.	14	6	20	22	†16.5
Augusta, Ga.	14	6	20	22	†15.5
Macon, Ga.	17	6	23	25	†16.5
Savannah, Ga.	16	6	22	24	†15.5
Jacksonville, Fla.	16	6	22	24	14.5
Miami, Fla.	17	6	23	25	15.5
Tampa, Fla.	16	6	22	24	14.5
Pensacola, Fla.**	17	6	23	25	14.5

Note: Net price of gasoline to dealers is 2c under posted t.w. price thru S. O. Kentucky territory.

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included. ‡Mobile gasoline prices include 1c city tax.

†Georgia kerosene prices include 1c state tax.

**Both tank wagon prices include 1c city tax at Pensacola which went into effect Oct. 15, 1926.

††Both tank wagon prices at Gulfport include Harrison county privilege tax of 2c.

S. O. NEBRASKA

Omaha, Neb.	16.25	4	20.25	22.25	13.25
McCook	17.75	4	21.75	23.75	14.75
Norfolk	16.75	4	20.75	22.75	13.75
North Platte	17.75	4	21.75	23.75	14.50
Scottsbluff	17.75	4	21.75	23.75	14.25

S. O. INDIANA

Chicago, Ill.	16	3	19	20	13
Decatur, Ill.	16.2	3	19.2	20.2	13.1
E. St. Louis, Ill.	15.4	3	18.4	17.4	12.2
Joliet, Ill.	16.4	3	19.4	20.4	13.3
Peoria, Ill.	16.2	3	19.2	20.2	13.1
Quincy, Ill.	16.2	3	19.2	20.2	12.9
Indianapolis, Ind.	16.2	4	20.2	21.2	14.2
Evansville, Ind.	16	4	20	21	14
South Bend, Ind.	16.4	4	20.4	21.4	14.4
Detroit, Mich.	16.8	3	19.8	20.8	14.7
Grand Rapids, Mich.	16.7	3	19.7	20.7	14.6
Saginaw, Mich.	16.9	3	19.9	20.9	14.8
Green Bay, Wisc.	16.6	2	18.6	19.6	13.4
Madison, Wisc.	16.3	2	18.3	17.3	13.1
Milwaukee, Wisc.	16.1	2	18.1	19.1	12.9
La Cross, Wisc.	17.2	2	19.2	20.2	14
Minneapolis, Minn.	17.2	3	20.2	21.2	13.9
Duluth, Minn.	17.5	3	20.5	21.5	13.9
Mankato, Minn.	17.1	3	20.1	21.1	13.7
Des Moines, Ia.	16.5	3	19.5	20.5	13.3
Davenport, Ia.	16.5	3	19.5	20.5	13.
Sioux City, Ia.	16.1	3	19.1	20.1	12.9
Mason City, Ia.	16.5	3	19.5	20.5	13.3
St. Louis, Mo.	*15.9	2	17.9	18.9	12.3
Kansas City, Mo.	†16.9	2	18.9	19.9	11.6
St. Joseph, Mo.	†16.5	2	18.5	19.5	12.2
Fargo, N. D.	18.9	3	21.9	22.9	15.9
Grand Forks, N. D.	19.2	3	22.2	23.2	16.2
Minot, N. D.	18.9	3	21.9	22.9	15.9
Pierre, S. D.	17	4	21	22	14.4
Huron, S. D.	17.3	4	21.3	22.3	14.7
Wichita, Kans.	14.8	3	17.8	18.8	11.8
Bartlesville, Okla.	14.5	4	18.5	19.5	11.5

S. O. Indiana's quantity contract price schedule thru territory except Chicago on tank truck deliveries of gasoline, figured from the service station price, is 2c for 500 gals. or more a month; 2½c for 2000 gals. or more a month and 3c for 6000 gals. or more a month.

In Chicago and vicinity, these discounts apply. Over 500 gals. per month, 2c per gal. off service station price; over 1,000 gals. per month, 4c per gal. off service station price.

*Includes city tax of ½c.

†Includes city tax of 1c.

S. O. OHIO

Ohio state-wide	15	4	19	20	13
Paulding County	15	4	19	20	11
Belmont, Columbiana, Jackson, Meigs, Noble, Vinton, Washington, Monroe, Gallia and Jefferson Counties, & *13 Competitive Pts.	14	4	18	18	13
At †5 Competitive Points	14	4	18	19	13
Bryan and Findlay	13	4	17	17	13

Note:—Discount to dealers and commercial accounts generally thru Ohio is 2c per gal. off t.w. price with some exceptions.

†These 5 points are: Hicksville, Arlington, Mortimer, Mendon, and Nevada.

*These 13 points are: Arcadia, Perrysburg, Fostoria, Urbana, Marion, St. Paris, Ada, Lima, Hamilton, Willard, Wapakoneta, St. Johns and Piqua.

MAGNOLIA PETROLEUM

Muskogee, Okla.	12	4	16	19	13
Oklahoma City	13	4	17	20	10
Tulsa, Okla.	11	4	15	19	10
Fort Smith, Ark.†	11	†4	15	17	12
Little Rock, Ark.	14	5	19	21	13
Texarkana, Ark.*	13	*4	17	19	12
Dallas, Tex.	13	4	17	21	13
Fort Worth, Tex.	13	4	17	20	12
Houston, Tex.	9	4	13	17	11
San Antonio, Tex.	13	4	17	21	11
El Paso, Tex.	11	4	15	18	16

*Within city of Texarkana, the state tax on gasoline is 4c per gal. conforming with the Texas state tax. In this district outside of the city the 5c Arkansas tax applies.

†Within city of Fort Smith, Oklahoma tax of 4c applies. In this district outside of the city, the 5c Arkansas tax applies.

S. O. NEW YORK

Due to local price conditions at many points in S. O. New York territory, actual prices on both gasoline and kerosene are being made at under the posted tank wagon prices published below.

Greater New York City: Boroughs of Manhattan, Bronx, Queens & Kings	14	2	16	18	15
Borough of Richmond	15	2	17	19	15
Albany, N. Y.	16	2	18	20	15
Buffalo, N. Y.	16	2	18	20	14
Rochester, N. Y.	16	2	18	20	13
Syracuse, N. Y.	16	2	18	20	12
Boston, Mass.	16	2	18	20	15

Above prices include these inspection fees on both gasoline and kerosene, per gallon: Alabama, 1/40c on gasoline, 1/2c kerosene; Arkansas, 1/20c on both: Florida, 1/8c on both; Georgia, 1/10c on both; Indiana, 4/25c to 1/2c on both; Kansas, 3/50c on both; Louisiana, 1/32c on gasoline; Minnesota, 3/50c on both: Missouri, 3/10c to 1/2c on both; Nebraska, 3/50c to 1/2c on both; North Carolina, 1/4c on both; North Dakota, 1/20c on both; Oklahoma, 4/25c on both; South Carolina, 1/8c on both; South Dakota, 1/10c on both; Tennessee, 2/5c on gasoline and 1/2c to 4/5c on kerosene; Wisconsin, 3/50c on both.

Kerosene inspection fees only, per gallon; Iowa, 7/100c; Michigan 1/5c to 4/5c per gal.

In Illinois, cities and villages have the power to appoint oil inspectors and fix inspection fees which is done in some instances. In some cases in the above state or other states there are local inspection fees.

Tank Wagon, Service Station Markets for Gasoline and Kerosene

Prices in Effect Oct. 21, 1929

S. O. NEW YORK

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Augusta, Me.	16	4	20	20	15
Manchester, N. H.	16	4	20	22	15
Burlington, Vt.	16	4	20	22	13

Note:—S. O. New York allows concessions of 1 to 2c per gal. to dealers under posted tank wagon prices.

*The Standard of New York does not operate stations in New York City. This figure is the retail price of a principal station operator in New York selling Socony gasoline.

ATLANTIC REFINING

Pittsburgh, Pa.	16	*	16	22	13
Philadelphia, Pa.	16	*	16	22	13
Allentown, Pa.	16	*	16	22	13
Erie, Pa.	13	*	13	17	13
Scranton, Pa.	16	*	16	22	13
Altoona, Pa.	16	*	16	22	13
Williamsport, Pa.	15	*	15	19	13
Dover, Del.	16	3	19	21	13
Wilmington, Del.	16	3	19	21	13
Boston, Mass.	16	2	18	20	15
Springfield, Mass.	16	2	18	20	15
Worcester, Mass.	16	2	18	20	15
Fall River, Mass.	16	2	18	20	13
Providence, R. I.	16	2	18	20	13
Hartford, Conn.	16	2	18	20	14
New Haven, Conn.	16	2	18	20	15
Atlantic City, N. J.	14	2	16	18	13
Camden, N. J.	15	2	17	19	13
Trenton, N. J.	15	2	17	19	13
Annapolis, Md.	16	4	20	22	13
Baltimore, Md.	15	4	19	21	12
Hagerstown, Md.	12	4	16	18	13
Richmond, Va.	15	5	20	22	13
Wilmington, N. C.	15	5	20	22	13
Brunswick, Ga.	16	6	22	24	**15.5
Jacksonville, Fla.	16	6	22	24	14.5

Note: 2c per gal. discount off t.w. price of gasoline thru territory; also 2c off to commercial accounts under contract for one year.

*4-cent state tax is collected by retail dealer and paid by him directly to state.

**Georgia kerosene prices include 1c state tax

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline price changes)

	Oleum Spirits	V.M.&P. Naphtha	Cleaner Naphtha
Chicago	15.7	17.2	19
Detroit	17.4	18.9	20.7
Kansas City	†15.9	†17.4	†19.2
Milwaukee	16.4	*19.9	*21.7
Minneapolis	**19.7	**21.2	*23
St. Louis	15.6	17.1	18.9
New York		16	23
Boston		19	23

*Includes 2c state tax. †Includes 1c city tax.
**Includes 3c state tax.

Petroleum Spirits

Tank Cars (Solvent)	
New York refineries	11.50–12.00
Philadelphia refineries	11.50–12.00
Tank Wagon or Steel Barrels	
New York City	16–18
New England	18–19
New Jersey	16–18
Pennsylvania	18–19

Note: 2c off above t.w. prices to large buyers in some instances.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
ONTARIO					
Toronto	19.5	5	24.5	28	20.5
Ottawa	16.5	5	21.5	25	20.5
Cochrane	24.5	5	29.5	..	25.5
Ft. William	22.5	5	27.5	31	23.5
MANITOBA					
Winnipeg	21.5	3	24.5	28	21.5
SASKATCHEWAN					
Regina	26	3	29	33	26
ALBERTA					
Edmonton	27.5	5	32.5	36	27.5
Calgary	23.5	5	28.5	32	23.5
BRITISH COLUMBIA					
Vancouver	23	3	26	30	24
QUEBEC					
Montreal	20.5	5	25.5	29	21
Quebec City	21.5	5	26.5	30	22
Three Rivers	21.5	5	26.5	30	22
NEW BRUNSWICK					
St. John	22	5	27	31	24
Moncton	22	5	27	31	24
NOVA SCOTIA					
Halifax	22	5	27	31	24
Sydney	22	5	27	31	24
PRINCE EDWARD ISLAND					
Charlottetown	22	5	27	31	24

Note: In districts surrounding these points 1c additional is added to city price.

Skilled Supervision
Guarantees the Quality of Gulf Products

COASTAL AND PARAFFINE CRUDES
GASOLINE — LUBRICATING OILS
NAPHTHA — GAS — OILS
WAX — PETROLEUM COKE
CYLINDER—ENGINE—CORDAGE

Gulf Refining Company

General Sales Offices
PITTSBURGH, PA.

District Sales Offices
New York, Boston, Philadelphia, Louisville, Atlanta, Houston, New Orleans

HOW MUCH HAS IT COST YOU
For The Oil That Has Leaked Away?

This loss is unnecessary, and could be prevented by the use of Brown Oil-tight Storage Tanks

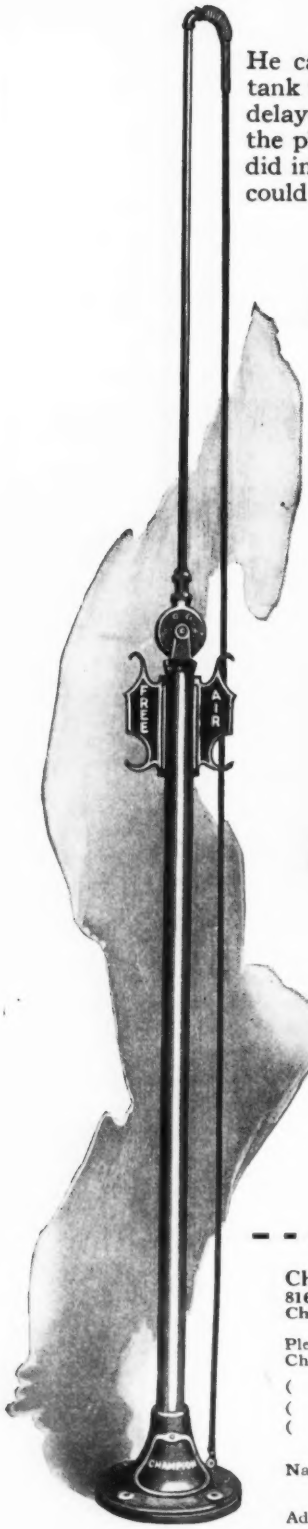
NO EXTRA COST

Send us your inquiry

BROWN SHEET IRON & STEEL CO.
St. Paul, — Minnesota

No Use Saying "Come Again" to This Man

He came to *get* air and *lost* it. The pressure in the tank was less than the pressure in his tires! He was delayed so long he had plenty of chance to remember the place with disgust! Inadequate equipment undid in ten minutes more than "service with a smile" could do in a month!



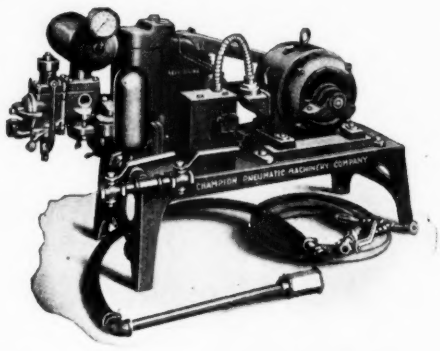
Ample Air Power Pays Big Dividends

Champion OE-41 Ball Bearing Air Compressor—A high-dividend investment for the business that wants to get ahead. Here's ample air power for today and reserve air for tomorrow's bigger business.

2 stage automatic ball bearing, vertical type; used for operating air lifts, air tools, pumps and cleaning and paint spraying equipment as well as for inflating tires.

Champion Service Tower

Practical—Dependable
Made in four types.



Champion Self-Oiling Car Washer

Washes twice as many cars in less time, with less effort than hand methods. No wonder it's popular with public and service station alike. CW-1 one-gun equipment delivers 5 gal. of water per minute at 300 lb. pressure, 1½ h. p. motor. Other models for 2, 3 or 4-guns.

Champion Pneumatic Machinery Co.
8168 South Chicago Ave.,
Chicago, Illinois

Please send me complete catalog information on Champion:

( ) Air Compressors ( ) Ceiling Reel
( ) Service Towers ( ) Paint Spray Equipment
( ) Car Washers

Name .....

Address .....

Cable "Champion-Chicago"

Crude Oil Prices (in Effect Oct. 21, 1929)

(Crude prices for the whole year in OIL PRICE HANDBOOK published annually)

EASTERN FIELDS
(All Penna. Crude prices effective Oct. 1, 1929)
(Posted by Joseph Seep Purchasing Agency)
Penna. Grade Oil in New York Transit Lines (Alleghany, N. Y. District).....*$3.05
Bradford District Oil in National Transit Lines (Bradford District).....*3.05
Penna. Grade Oil in National Transit Lines (Other Pennsylvania).....*3.05
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)..... 3.00
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)..... 2.90
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district)..... 2.70
Corning Grade in Buckeye Pipe Lines (Ohio) (Effective May 22, 1929)..... 1.90
Corning, O., heavy grade (Effective May 22, 1929) 1.80
Somerset Oil in Cumberland Pipe Lines (Kentucky) (Effective May 22, 1929)..... 1.80
Ragland Grade in Cumberland Pipe Lines (Kentucky) (Effective Jan. 29, 1929).....$0.60
***Oil run prior to July 1, 1929 is $3.00 per bbl**
(Posted by Stoll Oil Refining Co.)
Oil City, Ky., oil in Stoll lines (Effective Oct. 7, 1929)..... $1.70

MICHIGAN
(Posted by Dixie Oil Co.)
Traverse and Dundee (Muskegon):

32-32.9	$1.25	39-39.9	$1.60
33-33.9	1.30	40-40.9	1.65
34-34.9	1.35	41-41.9	1.70
35-35.9	1.40	42-42.9	1.75
36-36.9	1.45	43-43.9	1.80
37-37.9	1.50	44 and above	1.85
38-38.9	1.55		

(Posted by Pure Oil Co.)
Midland, Midland County.....$1.70

CENTRAL STATES FIELDS
Posted by Ohio Oil Co.
Effective May 21, 1929

Wooster	$1.90	Princeton	$1.75
Lima	1.80	Illinois	1.75
Waterloo	1.20	Plymouth	1.28
Indiana	1.57	West Kentucky	1.83

CANADIAN CRUDE
Posted by Imperial Oil Refineries, Ltd.
Petrolia.....$2.20
Oil Springs..... 2.27

OKLAHOMA, KANSAS and NORTH TEXAS
Prices of Paririe Oil & Gas Co.
(In Oklahoma, Kansas, North and East Central Texas)
Effective May 20, 1929

Below 25	$0.85	35-35.9	$1.40
25-25.9	0.90	36-36.9	1.45
26-26.9	0.95	37-37.9	1.50
27-27.9	1.00	38-38.9	1.55
28-28.9	1.05	39-39.9	1.60
29-29.9	1.10	40-40.9	1.65
30-30.9	1.15	41-41.9	1.70
31-31.9	1.20	42-42.9	1.75
32-32.9	1.25	43-43.9	1.80
33-33.9	1.30	44 and above	1.85
34-34.9	1.35		

Humble Oil & Refining Co. Prices
(Ranger, North Texas, Mexia, Powell, Boggy Creek, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes all in Texas.)
May 20, 1929, same schedule as Prairie in above fields.

Magnolia Petroleum Co.
(In Oklahoma, Kansas and North and East Central Texas)
May 20, 1929, Magnolia posted in above fields and in Panola Co., same schedule as Prairie, except these grades:

Below 26	$0.70	29-29.9	0.95
26-26.9	0.75	30-30.9	1.05
27-27.9	0.85	31-31.9	1.15
28-28.9	0.90		

May 20, 1929, Glasscock, Crane, Upton, Winkler, Howard and Mitchell Counties same prices as Humble's postings in West Texas which see.
Iatan district.....$0.93
Corsicana heavy..... 0.80
Luling..... 0.90
Mirando..... 0.90

Carter Oil Co.
(Oklahoma and Kansas)
May 20, 1929, same schedule as Prairie except Carter does not post oil below 25.

PANHANDLE, TEXAS
Humble Oil & Refining Co.
Effective May 20, 1929
Hutchinson and Carson Counties:

Below 32	$0.90	38-38.9	$1.25
32-32.9	0.95	39-39.9	1.30
33-33.9	1.00	40-40.9	1.35
34-34.9	1.05	41-41.9	1.40
35-35.9	1.10	42-42.9	1.45
36-36.9	1.15	43-43.9	1.50
37-37.9	1.20	44 and above	1.55

Wheeler County:

Below 30	$0.90	37-37.9	$1.30
30-30.9	0.95	38-38.9	1.35
31-31.9	1.00	39-39.9	1.40
32-32.9	1.05	40-40.9	1.45
33-33.9	1.10	41-41.9	1.50
34-34.9	1.15	42-42.9	1.55
35-35.9	1.20	43-43.9	1.60
36-36.9	1.25	44 and above	1.65

Gray County:

Below 29	$0.90	37-37.9	$1.35
29-29.9	0.95	38-38.9	1.40
30-30.9	1.00	39-39.9	1.45
31-31.9	1.05	40-40.9	1.50
32-32.9	1.10	41-41.9	1.55
33-33.9	1.15	42-42.9	1.60
34-34.9	1.20	43-43.9	1.65
35-35.9	1.25	44 and above	1.70
36-36.9	1.30		

Above prices met by The Texas Co. and Magnolia on May 20.

WEST TEXAS
Humble Oil & Refining Co.
Effective May 20, 1929
Winkler, Crane, Upton, Crockett, Howard and Pecos Counties, also Lea County, N. Mex.

Below 25	$0.70	25-25.9	$0.74
26-26.9	$0.78	32-32.9	$1.02
27-27.9	0.82	33-33.9	1.06
28-28.9	0.86	34-34.9	1.10
29-29.9	0.90	35-35.9	1.14
30-30.9	0.94	36 and above	1.18
31-31.9	0.98		

May 20, 1929, The Texas Co. posted same prices as Humble in Crane, Upton, Pecos and Winkler., and Magnolia in Crane, Upton, Winkler, Glasscock, Howard and Mitchell.

SOUTHWEST TEXAS
(Posted by Humble Oil & Refining Co.)
Effective May 20, 1929
Mirando.....$0.90
Salt Flat..... 1.25

NORTH LOUISIANA—ARKANSAS FIELDS
Prices of Standard Oil Co. of Louisiana
Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton, De Soto and **Cotton Valley.
Effective May 22, 1929

Below 28	$1.00	36-36.9	$1.45
28-28.9	1.05	37-37.9	1.50
29-29.9	1.10	38-38.9	1.55
30-30.9	1.15	39-39.9	1.60
31-31.9	1.20	40-40.9	1.65
32-32.9	1.25	41-41.9	1.70
33-33.9	1.30	42-42.9	1.75
34-34.9	1.35	43-43.9	1.80
35-35.9	1.40	44 and above	1.85

**Cotton Valley, below 36, $0.85. Beginning with 36-36.9, same schedule as above.
Smackover, below 24.....$0.85
do 24 and above..... 1.00
Bellevue..... 1.30
*Urania, La..... 1.10
†East El Dorado..... 0.75
*Posted by Louisiana Oil Refining Corp.
†Posted by Magnolia Petroleum Co.
May 20, The Texas Co. same schedule in Louisiana as Standard, plus these grades: 24-24.9, $0.85; 25-25.9, $0.90; 26-26.9, $0.95; 27-27.9, $1.00.
May 22, Magnolia, Atlantic, Shreveport-Eldorado Pipe Line, Louisiana Oil, and Gulf Companies met Standard schedule in Louisiana-Arkansas fields.

STEPHENS, ARKANSAS
Louisiana Oil Refining Corp., and Atlantic Oil Producing Co.
Effective May 22, 1929

Below 28	$0.90	30-30.9	$1.02
28-28.9	0.94	31-31.9	1.06
29-29.9	0.98	32 and above	1.10

GULF COASTAL
Posted by Humble Oil & Refining Co.
Effective May 20, 1929

Grades A	$1.30	29-29.9	$1.30
Grades B:		30-30.9	1.33
Below 25	$1.15	31-31.9	1.36
25-25.9	1.18	32-32.9	1.39
26-26.9	1.21	33-33.9	1.42
27-27.9	1.24	34-34.9	1.45
28-28.9	1.27	35 and above	1.48

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling, Pierce Junction, Sugarland and Raccoon Bend. All other fields are Grades A only.

Crude Price Changes

SAN FRANCISCO—On Oct. 21 Standard Oil Co. of California reduced crude in Santa Fe Springs, Signal Hill and Seal Beach fields, in amounts ranging from 40 cents to $1.05 per barrel. Santa Fe Springs crude was cut from 49 cents to $1.05 and Signal Hill and Seal Beach crude from 40 cents to 75 cents.

The Standard now posts Santa Fe Springs crude beginning with 21 gravity up to and including 28.9 gravity, at 40 cents per barrel; 29 to 39.9 gravity, 60 cents.

Signal Hill and Seal Beach crude is posted beginning with 19 gravity, up to and including 24.9 gravity, at 40 cents; 25 to 32.9 gravity, 60 cents.

To Enlarge Skelgas Organization

CLEVELAND, Oct. 21.—Enlargement of its liquefied gas sales organization is being undertaken in the middle west by the Skelly Oil Co. The product is sold in the Mississippi valley under the trade name Skelgas.

A recent issue of Printers Ink carries an advertisement of the Skelgas utility division of the company seeking executives capable of training and handling crews of 15 to 25 men pushing Skelgas installations.

Studies Eastern Marketing Practices

CLEVELAND, Oct. 21.—E. H. Haserot, president of the Pennant Oil & Grease Co. and the Pennant Service Corp., Los Angeles, is making a tour of eastern and middle western states. He has been making a study of marketing practices east of the Rocky Mountains and now is on his way home.

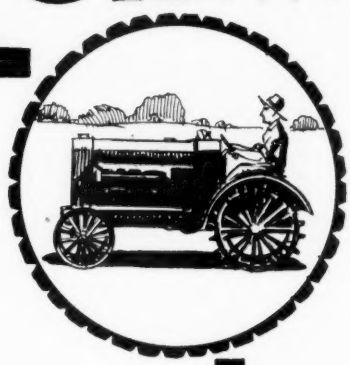
The Pennant Oil & Grease Co. is a compounder of lubricating oils including a castor blend with Pennsylvania oil which is sold under the trade name Penn-Vis. The Pennant Service Corp. operates a service station with tank car unloading facilities at the Union Terminal Market at Los Angeles.

Dealers' Car Stocks Rise

CLEVELAND, Oct. 21.—Sales of passenger cars and trucks by the General Motor Corp. to its dealers totaled 146,483 in September as compared with 167,460 units in Sept. 1928. Car sales by dealers totaled 145,171 as compared with 148,784 in September last year.

Since Jan. 1 the company has sold 1,675,964 units to dealers and the dealers have sold 1,581,960 to users. These figures would indicate an increase of cars in dealers hands of 94,064 in the nine months.

The Season is now on!
. . . for Quality Kerosene and Furnace Oil . . . .



SUPER KEROSENE—Our regular grade at Cyril, Oklahoma, now running 42/44 gravity, Tagliabue open cup flash not over 150 F., end point not over 560 F., double treated, water-white, doctor-sweet, with excellent burning test—a splendid kerosene for incubators, or for general burning, heating, power and refrigerating purposes.

ZERO FURNACE OIL—Made at Colorado, Texas, a 35/37 gravity, light straw gas oil, Cleveland open cup flash not over 175 F., Initial approximately 400 F., end point under 630 F., Zero cold test, sulphur under three-quarters of one per cent, fully treated, doctor sweet odor, shipped in clean cars—An excellent furnace oil that has stood the test of winter.

We solicit inquiries for spot shipments; also contracts covering buyer's requirements over winter months—guaranteeing prompt shipments.

Inquiries invited from our jobbing friends on COL-TEX ETHYL and COL-TEX REGULAR gasoline as well as our exclusive franchise on INDUSTRIAL NAPHTHAS.

ANDERSON-PRICHARD OIL CORPORATION
COL-TEX REFINING COMPANY

PRODUCERS AP REFINERS

OKLAHOMA CITY, OKLA.

Crude Oil Prices (in Effect Oct. 21, 1929)

(Crude prices for the whole year in OIL PRICE HANDBOOK published annually)

GULF COASTAL

Prices of The Texas Co.

Effective May 20, 1929

Grades A.....$1.30

‡Grades B (light crude):

35-35.9.....$1.49	40-40.9.....$1.69
36-36.9..... 1.53	41-41.9..... 1.73
37-37.9..... 1.57	42-42.9..... 1.77
38-38.9..... 1.61	43-43.9..... 1.81
39-39.9..... 1.65	44 and above.... 1.85

*Grades B.....$1.15

*Grades B include all heavy crudes which do not meet tests for Grades A or for Gulf Coast light crude.

‡The Texas Co.'s gravity and price schedule on all below 35° is same as Humble's postings on Grades B

ROCKY MOUNTAIN FIELDS

Prices of Ohio Oil Co., and Midwest Refining Co.

(Salt Creek prices effective May 20, 1929)

‡Salt Creek 29-29.9	$1.10
" " 30-30.9	1.15
" " 31-31.9	1.20
" " 32-32.9	1.25
" " 33-33.9	1.30
" " 34-34.9	1.35
" " 35-35.9	1.40
" " 36-36.9	1.45
" " 37 and above	1.50
Elk Basin	1.65
Grass Creek light	1.65
Big Muddy	$1.43
Lance Creek	1.68
Rock Creek	1.40
Mule Creek	1.20
Rex Lake	1.10
‡Osage	1.65
‡Cat Creek, Mont.	1.65
Sunburst, Mont.	1.75
‡Hogback, N. Mex.	1.70
Artesia, N. Mex.	1.08

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

CALIFORNIA

***Standard Oil Co. of California**

Gravity	Signal Hill Seal Beach	Alamitos Heights Huntington Beach	Inglewood Torrance	Olinda-Brea Canon Richfield	Athens-Rosecrans Dominguez	Elwood Terrace	Whittier La Habra	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway Sunset Buena Vista & Elk Hills	Lost Hills	Coalinga	Wheeler Ridge	Montebello	Kettleman Hills	*Santa Maria (Orcutt)	*Ventura
14-14.9	....	$ .70	$ .70	$ .70	....	....	$ .70	$ .70	....	$ .50	$ .50	$ .50	$ .50	$ .50	$ .70	....	$ .65	$ .70
15-15.9	....	.70	.70	.70	....	....	.70	.70	....	.50	.50	.50	.50	.50	.70	....	.65	.70
16-16.9	....	.70	.70	.70	....	....	.70	.70	....	.50	.50	.50	.50	.50	.70	....	.65	.70
17-17.9	....	.70	.70	.70	....	....	.70	.70	....	.50	.50	.50	.50	.50	.70	....	.65	.70
18-18.9	....	.75	.75	.75	....	....	.75	.75	....	.50	.56	.56	.56	.56	.70	....	.70	.75
19-19.9	$.40	.80	.80	.80	....	....	.80	.80	....	.50	.62	.62	.62	.62	.75	$1.65	.70	.80
20-20.9	.40	.85	.85	.85	....	....	.84	.84	....	....	.68	.68	.68	.68	.80	for	.70	.85
21-21.9	.40	.89	.89	.89	....	....	.88	.88	.40	....	.74	.74	.74	.74	.85	55°	.86	.86
22-22.9	.40	.93	.93	.93	....	....	.91	.91	.40	....	.80	.80	.80	.80	.90	gravity	.87	.87
23-23.9	.40	.97	.97	.97	....	....	....	.94	.40	....	.85	.85	.85	.85	.95	and	.90	.90
24-24.9	.40	1.01	1.01	1.01	1.01	....	....	.97	.40	....	.90	.90	.88	.88	.98	over	.94	.94
25-25.9	.60	1.05	1.05	1.05	1.05	....	....	1.00	.40	....	.95	.95	.91	.91	1.01	....	.98	.98
26-26.9	.60	1.09	1.09	1.09	1.09	....	....	1.04	.40	....	1.00	1.00	.94	.94	1.04	....	1.02	1.02
27-27.9	.60	1.13	1.13	1.13	1.13	....	....	1.08	.40	....	1.05	1.05	.98	.97	1.07	....	....	1.06
28-28.9	.60	1.17	1.17	1.17	1.17	....	....	1.12	.40	....	1.10	1.10	1.02	....	1.10	....	....	1.10
29-29.9	.60	1.21	....	1.21	1.21	....	....	1.16	.60	....	1.16	1.16	1.06	....	1.13	....	....	1.14
30-30.9	.60	1.25	....	1.25	1.25	....	....	1.20	.60	....	1.22	1.22	1.10	....	1.16	....	....	1.18
31-31.9	.60	1.30	....	....	1.30	....	....	....	.60	....	1.28	1.28	1.14	....	....	....	....	1.23
32-32.9	.60	1.35	....	....	1.35	....	....	....	.60	....	1.34	1.34	1.18	....	....	....	....	1.28
33-33.9	....	....	....	....	1.41	....	....	....	.60	....	1.40	1.40	1.22	....	....	....	....	1.34
34-34.9	....	....	....	....	1.47	$1.16	....	....	.60	....	....	1.46	1.26	....	....	....	....	....
35-35.9	....	....	....	....	1.53	1.22	....	....	.60	....	....	....	1.30	....	....	....	....	....
36-36.9	....	....	....	....	1.59	1.28	....	....	.60	....	....	....	....	....	....	....	....	....
37-37.9	....	....	....	....	1.65	1.34	....	....	.60	....	....	....	....	....	....	....	....	....
38-38.9	....	....	....	....	1.71	1.40	....	....	.60	....	....	....	....	....	....	....	....	....
39-39.9	....	....	....	....	1.77	1.46	....	....	.60	....	....	....	....	....	....	....	....	....
40-40.9	....	....	....	....	1.83	1.52	....	....	....	....	....	....	....	....	....	....	....	....
41-41.9	....	....	....	....	1.89	1.58	....	....	....	....	....	....	....	....	....	....	....	....
42-42.9	....	....	....	....	1.95	1.64	....	....	....	....	....	....	....	....	....	....	....	....

*Santa Maria and Ventura postings are by Union Oil Co. Union Oil Co. posts same prices in all above fields as Standard except it does not post prices in Wheeler Ridge, Whittier, La Habra, Newhall and Kettleman Hills. Standard does not contract for crude testing 11-13.9 gravity, but pays 45c a barrel when purchased.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are average market prices for materials used by refiners and compounders effective on the date shown.

Refiners' Supplies

	Oct. 21	Oct. 14
Soda Ash light 58% bags, cwt.	$1.32	$1.32
Silicate of Soda 60 deg. drums, ...cwt.	$1.55	$1.55
Silicate of Soda 40 deg. tank cars.....cwt.	$0.60	$0.60
Silicate of Soda 40 deg. drums .....cwt.	$0.80	$0.80
Sal Soda wks.....	$0.90-1.00	$0.90-1.00
Caustic Soda 76% solid, cwt.	$2.90	$2.90
Sulfuric Acid 60 deg. tank cars, f.o.b. shipping point per ton.....	$11.00	$11.00
Oleum 20%, fuming sulfuric, tank cars, wks.....	$18.50	$18.50
Sulfur, flowers of.....cwt.	$3.10-4.00	$3.50-4.50
Liquid Chlorine, tank cars, wks.....lb.	3.50-5.00	3.50-5.00

Compounders' Supplies

	Oct. 21	Oct. 14
Vegetable Oils		
Linseed carloads, spot....lb.	15.90	16.30
Tanks, spot.....	15.10	15.50
Soya Bean, Tanks, coast, lb.	11.25	11.25
Oleic Acid		
Distilled, tanks.....lb.	9.75	9.75
Distilled, bbls.....lb.	10.625	10.625
Saponified, tanks.....lb.	9.75	9.75
Saponified, bbls.....lb.	10.625	10.625
Lard Oils		
Prime Winter Strained....lb.	15.25	15.25
Extra Winter Strained....lb.	12.75	12.75
Extra.....lb.	12.50	12.50
Extra No. 1.....lb.	12.00	12.00
No. 1.....lb.	11.75	11.75
No. 2.....lb.	11.50	11.50
Tallow oil.....lb.	11.00	11.00
Neatsfoot Oil		
Pure, bbls.....lb.	14.50	14.50
Extra, bbls.....lb.	12.25	12.25
No. 1 bbls.....lb.	12.00	12.00
Cold Pressed.....lb.	12.50	12.50
Fish Oils		
Menhaden Oil		
Light Pressed.....gal.	70	70
Light Pressed, tank cars, N. Y.....gal.	58–60	58–60
White bleached.....gal.	76	76
Yellow bleached.....gal.	71	71
Whale, extra winter bleached, ...gal.	82	82
Naval Stores		
Steam distilled turpentine, N. Y.....gal.	53	53
Steam distilled turpentine, Savannah.....gal.	53	53
Gum turpentine, N. Y....gal.	56.50	56.50
Gum turpentine, f.o.b. cars Savannah.....gal.	50.50	50.50
Wood Rosin F, N. Y.....bbl.	$8.05	$8.05
Wood Rosin F, Savn'h..bbl.	$7.25	$7.25
Gum Rosin B, N. Y.....Bbl.	$9.00	$9.00
Gum Rosin B, f.o.b. cars Savannah.....bbl.	$8.15	$8.15
Rosin oil, pure.....gal.	61	61
Rosin oil, compounded...gal.	51	51
Pine Tar		
Kiln burnt.....bbl.	$13.00-14.00	$13.00-14.00
Retort.....bbl.	$13.50-14.50	$13.50-14.50
Alcohol		
Denatured Formula 5, in bbls., per gal.....	59–66	59–66

OIL STOCKS AND FINANCES

National Petroleum News

Independent Oil & Gas Doubles Net Income This Year

TULSA, Oct. 19

NET income of the Independent Oil & Gas Co. for the nine months ended Sept. 30, 1929, after deduction of all operating expense, depletion, depreciation and federal taxes, was $5,097,502.80, according to the third quarterly financial statement made public at the Independent's Tulsa headquarters.

The Independent's operating income for the same period, before deduction of depreciation, depletion and federal income taxes, was $10,731,557.72. Gross income for the nine months was $21,679,681.19, as against $12,877,438.55 for the corresponding period in 1928. This comparison shows that Independent's gross earnings have almost doubled this year as compared to last. Pertinent figures in the statement are as follows:

Three months ending Sept. 30, 1929: Gross income, $7,065,110.42; charges to operations, $3,868,329.33; net income before deduction of depreciation, depletion and federal income tax, $3,196,781.09; depreciation and depletion reserve, $1,587,774.29; federal income tax reserve, $146,000.00; net income after depreciation, depletion and federal income taxes, $1,463,006.80.

	Nine Months Ended Sept. 30. 1929	Nine Months Ended Sept. 30. 1928
Gross Income	$21,679,681.19	$12,877,438.55
Charges to Operations	10,948,123.47	6,520,613.60
Net Income (Before Depreciation, Depletion and Federal Income Tax)	$10,731,557.52	$ 6,356,824.95
Reserves		
Depreciation and Depletion	$ 5,043,054.92	$ 4,092,851.85
Federal Income Tax	591,000.00	125,000.00
	$ 5,634,054.92	$ 4,217,851.85
Net Income (After Depreciation, Depletion and Federal Income Tax)	$ 5,097,502.80	$ 2,138,973.10

E. H. Moore, president of the company, in a statement accompanying the financial report, reveals that Independent has 1,379,295 shares of stock outstanding. Funded debts of the company amount to $3,619,500, all in the form of convertible notes. All other indebtedness has been retired since the first of the year. Current assets amount to $12,320,000, of which $4,750,000 is cash. Total current liabilities are $2,541,000.00, leaving a net working capital of $9,779,000.00.

"It will be observed that total net earnings for 1929 to date, amounting to more than $5,000,000 after deduction of all depreciation, depletion and federal tax charges, represent net earnings of $3.70 per share for the stock outstanding at the present time," Mr. Moore said. "This represents almost twice the dividend requirements for the entire year, and is approximately two and one-half times greater than for the same period last year.

"The company's net crude oil production for the nine months to date averages 30,764 barrels per day, as compared to 25,547 barrels per day for the same period last year. It has increased its acreage reserve from 450,000 to 800,000 acres since the first of the year, and has extended its field of operations from Oklahoma, Kansas, Texas, Arkansas and New Mexico into California and the new coastal fields of South Texas. It is rapidly acquiring and will continue to acquire extensive potential reserves in California.

"Principal capital expenditures for the first nine months of 1929 have been $3,251,000 for leaseholds and royalties; $2,980,000 for the drilling of wells; $1,853,000 in refinery construction; $404,000 for gasoline plant construction; $404,000 for gas line construction; $65,000 for oil line construction; $702,000 for filling stations and sites; $900,000 for well equipment. This is a total of $10,559,000, representing a tremendous contribution toward the company's earning power.

"The company is marketing about 50 million cubic feet of natural gas a day and is operating a number of natural gasoline plants in Oklahoma and Kansas. It has more than 450 bulk and service stations located in the logical distribution territory tributary to its two refineries at Kansas City and Okmulgee. Through these stations, it has marketed in excess of 57 million gallons of petroleum products so far this year.

"It is the purpose of the company to continue to expand its own marketing outlets and dealer accounts to the point where its refinery capacity will be provided for by these markets. It will therefore be seen that the company's facilities will be such as to more nearly stabilize earnings."

PETROLEUM
AND
TRADING
CORPORATION

CLASS A STOCK

BOUGHT—SOLD—QUOTED

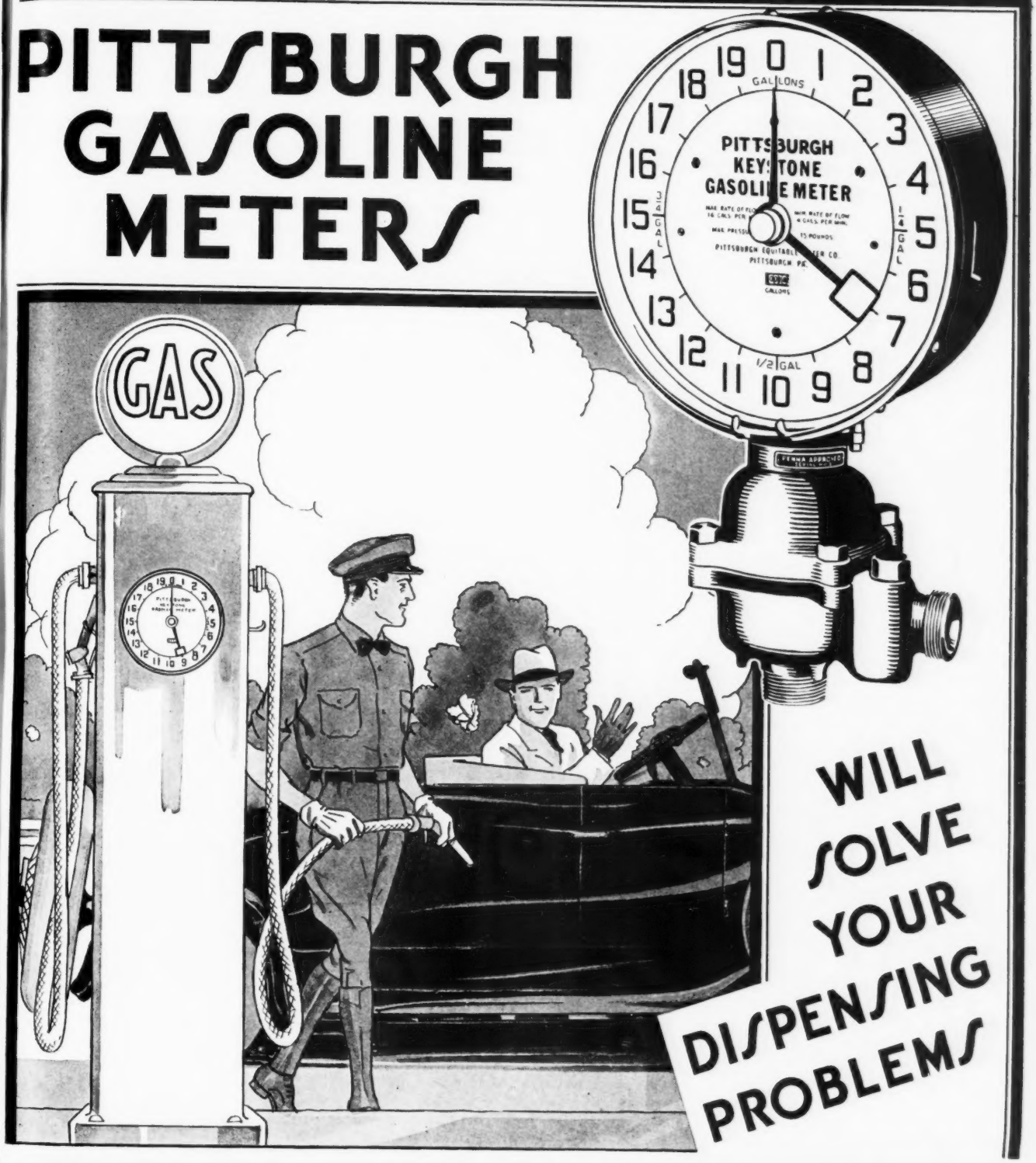
CARL H. PFORZHEIMER & CO.
Specialists in Standard Oil Securities
25 Broad Street New York
Phone HANover 5484

Atlantic Refining Has Gain in Earnings

CLEVELAND, Oct. 21.—Earnings of Atlantic Refining Co. and subsidiaries in the quarter ended Sept. 30 amounted to $4,824,591 after depreciation, depletion, development costs, taxes, and other charges. This was equivalent to $1.81 a share on the common stock. In the second quarter $1.73 a share was earned on the common stock in the second quarter and $2.20 a share in the third quarter of 1928.

In the nine months ended Sept. 30, Atlantic netted approximately $13,-

PITTSBURGH GASOLINE METERS



WILL SOLVE YOUR DISPENSING PROBLEMS

PITTSBURGH EQUITABLE METER COMPANY

MAIN OFFICE AND WORKS PITTSBURGH, PA.

NEW YORK CHICAGO COLUMBIA, S.C. LOS ANGELES DALLAS
TULSA SEATTLE KANSAS CITY SALT LAKE CITY

Transactions in Oil Shares on New York Stock Exchange

1928 High	1928 Low	1929 High	1929 Low	Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended Oct. 19 Sales	First	High	Low	Last	Change
43⅞	27⅛	42⅝	22½	(sh) 922,075	N.P.	Amerada Corp.	50cQ	July 31, 29	11,100	27¾	27⅞	25	26⅞	— ⅛
85	51¼	64¾	30	(sh) 209,180	N.P.	American Republics Corp.	....	.....	3,400	39½	40¾	33½	37	— 9⅛
53⅜	37½	47¼	40½	$56,000,000	$25	Associated Oil	50cQ	Sept. 30, 29	110	44⅝	45	44½	44⅝	0
62½	50	77⅞	53⅜	50,000,000	25	Atlantic Refining	‡25cQ	Sept. 15, 29	73,400	58	60	55	55	— 2¾
53	20	49½	31½	47,261,125	25	Barnsdall Corp. A	‡50cQ	Aug. 6, 29	25,600	33¾	35	32⅜	32⅜	— 1⅜
51⅜	20	49	38½	300,525	25	do B	‡50cQ	Aug. 6, 29	.....	.....	.....	.....	.....	.....
24½	12¼	32⅞	20	(sh) 956,075	N.P.	Beacon Oil	....	.....	12,100	29⅜	30	27½	27½	— 1½
36	25¼	34½	25	$51,524,150	$25	California Petroleum	....	Jan. 1, 29	.....	.....	.....	.....	.....	.....
.....	.....	37¾	29½	(sh) 4,634,163	N.P.	Continental Oil (Delaware)	....	.....	102,600	35	37¼	34¼	36¼	— 2
94⅞	68	94¾	61	21,031,400	100	General Asphalt	....	.....	7,600	85¼	85¾	80⅜	80⅝	— 4⅜
141	110⅜	138	104½	6,628,200	100	do pfd	$1.25Q	Sept. 3, 29	400	126¼	127	125	125	— ¼
167	79	109	68½	25,000,000	100	Houston Oil	....	.....	49,200	92½	95¾	85⅛	85⅛	— 5
38⅜	21¾	39¼	29½	(sh) 1,333,157	N.P.	Independent Oil & Gas	50cQ	July 31, 29	16,200	30⅜	31¼	29⅜	30¼	— ¼
39⅝	9	53	29	$4,299,190	$10	Indian Refining	....	Dec. 15, 20	36,400	43⅝	44½	38¾	39	— 4¼
37¼	8½	51¼	28	4,550,110	10	do ctfs	....	.....	11,500	42¼	42½	37	37	— 4⅝
185	140	165	160	1,977,700	100	do pfd. new	$1.75Q	Oct. 1, 29	.....	.....	.....	.....	.....	.....
39⅛	27⅜	38⅜	26	3,992,387	N.P.	Lago Oil & Transport	....	May 2, 27	1,700	32¼	32½	30⅛	30⅛	— 2
19¾	9⅜	18	10¼	(sh) 1,187,298	N.P.	Louisiana Oil Refining	.....	.....	13,100	10⅞	11⅜	10¾	11	+ ¼
96	78	100¼	89	$4,000,000	$100	do pfd	$1.62½	Aug. 15, 29	30	90⅜	90⅜	90⅜	90⅜	+ ⅜
25½	12½	18½	11⅝	(sh) 330,000	N.P.	Maracaibo Oil	....	.....	1,800	14¾	15	14	14	— ⅛
360	250	295	202	$45,942,800	$100	Mexican Petroleum	$3Q	Oct. 20, 29	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	12,000,000	100	do pfd	$2Q	Oct. 20, 29	.....	.....	.....	.....	.....	.....
73	4⅝	69⅜	21¾	(sh) 995,500	N.P.	Mexican Seaboard	....	Nov. 15, 24	27,800	30⅛	31⅝	23	23	— 7¼
44½	25⅛	39⅞	30½	(sh) 1,857,461	N.P.	Mid-Continent	50cQ	Aug. 15, 29	10,200	34	34¼	32	33	— ½
120½	103¼	121	120¼	$6,718,000	$100	do pfd	$1.75Q	Sept. 1, 29	.....	.....	.....	.....	.....	.....
7⅜	2⅜	5⅛	1¾	23,849,720	10	Middle States	....	July 1, 23	4,300	2	2	1⅞	2	+ ⅛
5⅞	1½	3⅝	1½	5,950,500	10	do ctfs	....	.....	2,300	1¾	1¾	1½	1½	0
2¼	1	1½	1	(sh) 3,500,000	N.P.	Pacific Oil	....	.....	31,000	1	1⅛	1	1	0
55½	38¼	69	40¼	$50,000,000	$50	Pan American P. & T.	....	Oct. 20, 27	3,500	65	66⅛	64	64	— ¼
58⅞	37¾	69¼	40½	121,101,400	50	do B	....	Oct. 20, 27	91,800	65½	66¾	63⅛	63¾	— ⅜
28⅜	15½	17½	13½	(sh) 400,000	N.P.	Pan American Western B	....	Jan. 30, 27	.....	.....	.....	.....	.....	.....
21⅜	11½	15¼	5¾	(sh) 199,370	N.P.	Panhandle P. & R	....	.....	800	6½	7⅜	6⅜	7⅜	+ ⅜
106¼	70	76	47½	$2,935,200	$100	do pfd	....	July 2, 23	200	..	53	52	53	+ 3
53⅞	35¼	47	35	(sh) 2,406,803	N.P.	Phillips Petroleum	37½cQ	Oct. 1, 29	43,900	42⅛	42½	38½	34⅞	— 2
5¼	½	3⅜	1½	$29,622,925	$25	Pierce Oil Corp	....	.....	1,200	1¾	1⅞	1¾	1¾	0
50	16¼	51½	30	15,000,000	100	do pfd	....	Feb. 1, 22	1,600	43½	43½	39¼	40	— 3½
6⅝	3½	5⅞	3⅞	(sh) 2,500,000	N.P.	Pierce Petroleum	.....	.....	8,000	4	4⅛	3⅞	3⅞	— ⅛
64⅝	59½	65⅝	50⅜	$60,636,450	$25	Prairie Oil & Gas	‡50cQ	Sept. 30, 29	5,200	55	55⅜	54¼	54¼	— ¾
.....	.....	65	53⅜	101,250,000	25	Prairie Pipe Line	‡75cQ	Sept. 30, 29	3,900	61¾	62⅞	61⅛	61½	0
29⅞	16	25⅞	11½	37,450,850	50	Producers & Refiners	....	Sept. 15, 23	1,700	13⅞	13⅞	12	12¼	— ⅛
49⅜	41	46¾	27	2,845,350	50	do pfd	....	May 1, 25	140	36⅛	36¼	34	35	— 2
31¼	19	30¾	23¼	75,959,255	25	Pure Oil Co	37½cQ	Sept. 1, 29	272,100	28⅜	30¼	27⅞	28⅛	+ ¼
119	108	116	110½	13,000,000	100	do 8% pfd	$2Q	Oct. 1, 29	110	114	115	114	114	— ⅜
56	23½	49⅝	37⅛	47,127,725	25	Richfield Oil	50cQ	Aug. 15, 29	7,300	39	39	37½	37½	— 1
.....	.....	42½	25¼	(sh) 1,200,000	N.P.	Rio Grande Oil Co	‡$1S.A.	July 25, 29	8,800	28¼	28¼	26⅜	26⅜	— 1⅜
64	44⅝	64	49⅞	(sh) 546,646	$13.40	Royal Dutch N. Y. shares	$1.873	Aug. 10, 29	361,500	61	63¼	59¾	59⅞	— 1½
57½	39⅜	55⅜	43	(sh) 65,203,000	£2	Shell Transport & T	$1.447	July 23, 29	.....	.....	.....	.....	.....	.....
39⅜	23¼	31⅜	25	12,254,979	N.P.	Shell Union Oil	35cQ	Sept. 30, 29	31,400	27½	28	26½	26½	— 1
27¼	18⅜	40⅛	18⅛	$8,357,280	$10	Simms Petroleum	40cQ	Sept. 14, 29	5,600	33⅛	34	30⅛	30⅛	— 1⅞
46¾	17⅜	45	31½	5,494,095	N.P.	Sinclair Consolidated	‡50cQ	Oct. 15, 29	91,900	35⅛	35¾	33	33⅛	— 2⅛
110	102½	111	107¾	$16,025,200	$100	do pfd	$2Q	Aug. 15, 29	300	109	109¼	109	109¼	+ ¼
42⅜	25	46½	32⅞	27,396,590	25	Skelly Oil Co	50cQ	Sept. 16, 29	32,900	41	41⅞	37	38½	— 2½
80	53	81⅞	64	(sh) 13,016,435	N.P.	S. O. California	62½cQ	Sept. 16, 29	28,100	75½	76¼	72⅝	72⅝	— 2⅜
59¾	37¾	83	48	$612,095,850	$25	S. O. New Jersey	‡25cQ	Sept. 16, 29	667,800	79⅜	82⅝	75¾	77	— 2⅜
45½	28¾	48⅛	37⅝	434,094,575	25	S. O. New York	40cQ	Sept. 16, 29	98,900	44⅝	44⅞	42¼	42½	— 1½
77	31½	84¾	57	(sh) 1,297,847	N.P.	Sun Oil	25cQ	Sept. 16, 29	12,100	80⅛	86⅜	80⅛	81⅞	+ 1⅜
110	100	105½	100	$5,000,000	$100	do pfd	$1.50Q	Sept. 1, 29	90	104	104½	104	104	0
14¼	2½	24	16½	(sh) 1,304,698	N.P.	Superior Oil Corp	....	Dec. 20, 20	7,900	19⅞	20	17½	18	— 2
74¾	50	71⅞	57¼	$211,082,925	$25	The Texas Corp	75cQ	Oct. 1, 29	78,900	65⅛	65⅜	62	62¼	— 2¾
26⅝	12⅛	23⅞	14	8,380,340	10	Texas Pacific Coal & Oil	2½%	Sept. 30, 29	26,900	16⅛	17⅞	15⅛	15⅛	+ ⅜
41½	19⅝	40	25⅛	(sh) 2,179,275	N.P.	Tide Water Oil Co	20cQ	Sept. 30, 29	1,200	32½	33¾	32⅜	32½	+ 1¼
100⅛	86¾	97½	89¾	$20,321,000	$100	do 5½% pfd	$1.25Q	Aug. 15, 29	900	95	93	91⅞	93	0
25	14¾	23½	17	(sh) 4,877,976	N.P.	Tide Water Associated	....	Aug. 1, 27	32,600	18⅛	18⅞	17¼	17¼	— 1
91¾	81⅞	90⅞	84	$72,989,200	$100	do pfd	$1.50Q	Oct. 1, 29	2,600	86½	87	86	86	— ⅝
14½	6⅜	15¼	9	(sh) 3,842,029	N.P.	Transcontinental Oil	.....	.....	106,000	13⅜	13⅜	12	12⅛	— 1⅛
58	42¾	54½	45½	$40,858,375	$25	Union Oil of California	50cQ	Aug. 10, 29	29,700	54¼	54¾	51¼	51¼	— 1⅜
128⅛	110	163¾	121⅞	31,101,200	100	Union Tank Car Co	$1.25Q	Sept. 3, 29	400	152	152	150	150	— 2½
44⅞	26	42⅞	27⅛	(sh) 488,359	N.P.	Warner Quinlan	50cQ	Oct. 1, 29	40,200	29⅜	30¼	28⅛	28¼	— 1⅜
38	20⅛	38	30¼	(sh) 490,000	N.P.	White Eagle Oil & Refining	50cQ	Oct. 21, 29	4,200	34¼	34½	32¾	32¾	— 2¾
22⅛	17¼	29¾	16	(sh) 428,967	N.P.	Wilcox Oil & Gas	....	May 10, 28	7,200	17¾	23	17¼	20½	+ ¾

*New High †New Low XEx-Dividends ‡Also Extras s-Stock Total Sales 2,561,380

Pittsburgh Stock Exchange

Transactions Week Ended Oct. 18, 1929

	Sales	High	Low	Last	Change
Ark. Nat. Gas	1,040	22½	20	20	—3½
do pfd	2,900	8⅜	8¼	8⅜	0
Devonian Oil	1,145	15	15	15	0
Dixie Gas & Util pfd	80	75⅛	75	75⅛	— ⅛
Lone Star Gas	9,734	63	52½	55½	—7
Plymouth Oil	12,943	*36	32	32	+2
Salt Creek Cons	100	2¼	2¼	2¼	....
Shamrock O. & G	2,750	15½	14	14¼	0

*New high.

Pittsburgh Curb Market

Transactions Week Ended Oct. 18, 1929

	Sales	High	Low	Last	Change
Ark. Gas "A"	2,324	22	19⅜	20	—2⅝
Phoenix Oil	2,000	.65	.60	.60	—.05

687,000 or $5.48 a share on the common stocks after six months' dividend requirements on the 7 per cent preferred stock which has been retired. In the corresponding nine months of 1928, Atlantic netted $5.43 a share on the common stock.

Lighter Ethyl to Be Sold By S. O. Indiana

CHICAGO, Oct. 19.—On Oct. 15 the Standard Oil Co. of Indiana opened a campaign to tell the residents of the middle west about its new Ethyl gasoline.

This new Ethyl has a gravity of about 60-62, end point between 375 and 380 and an initial of 90 to 91 degrees. The present Red Crown Ethyl has been entirely discontinued, and orders were given to all bulk plant men to let their stocks run low so that they might be displaced by the new product.

According to Standard Oil Co. officials the intention of the new product is to meet ever increasing competition on the anti-knock gasolines. They claim that the new gasoline has a very high anti-knock value of its own without the addition of Ethyl fluid and that the combination will mean a product very high in anti-knock features.

The Standard's advertising campaign opened Oct. 15 with insertions in approximately 1600 newspapers, both daily and weekly, throughout the 10 states where it markets. This will be followed by radio broadcasts from a number of stations. It is estimated that this campaign will reach some 12,000,000 people.

Cleveland Stock Market

Oct. 18	Par Value	Bid	Asked
Canfield Oil Co	$100	110	146
do pfd	100	.....	.....
Fred G. Clark	10	9½	11
National Refining	25	37¾	40½
do pfd	100	132	135
Paragon Refining	25	16½	17½
do pfd	N.P.	45	50
do ctfs	..	..	22

x Ex dividend.

Quality and Service

Imperial

QUALITY PRODUCTS

GASOLINES
U. S. Motor
High Test
High Compression
Aviation
KEROSENES
TRACTOR FUELS
FURNACE OILS
GAS OILS
FUEL OILS
ROAD OILS
LUBRICATING OILS

An Imperial distributor who gives Imperial service with Imperial Quality.

Consumers of our trade marked products can depend on performance for any service requirement. Distributors of Imperial Gasolines endeavor to satisfy the motorist with "*Miles of Smiles*" and "*Miles of Economy.*" Drive into an Imperial station, *one with the mark of quality* and you can depend on service and performance.

Imperial Refineries

Imperial Refining Co. **San Angelo Refining Co.**
Kettle Creek Refining Co. **Wickett Refining Co.**

General Offices
TULSA, OKLAHOMA

Standard Oil Stocks on New York Curb

1928 High	1928 Low	1929 High	1929 Low	Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended Oct. 19 Sales	First	High	Low	Last	Change
22⅜	14⅞	18¾	14¼	£4,126,460	£ 1	Anglo-American Oil	36c	June 5, 29	.....	.....	.....	.....	.....	.....
21½	15	18	13	.....	.....	do certificates	36c	June 5, 29	3,400	15	16⅝	15	15¼	+ ⅛
20½	14⅜	17	12¾	.....	£ 1	do cts. non-voting	36c	June 5, 29	200	13½	13½	13⅜	13⅜	— ⅛
5	1¼	2½	1	(sh) 500,000	N.P.	Atlantic Lobos	.....	.....	100	1	1	1	1	— ⅛
9¾	3¼	4⅜	1	$10,000,000	$50	do pfd	.....	.....	300	1⅝	1⅝	1½	1½	— ⅛
56	44½	46½	26	$1,000,000	25	Borne-Scrymser	$1S.A.	Oct. 15, 29	600	28	29¾	28	28	+ 1⅛
76	58	74¼	65	10,000,000	50	Buckeye Pipe Line	‡$1Q	Sept 14, 29	100	67½	67½	67½	67½	— ⅜
161	117¼	210	140⅜	3,000,000	25	Chesebrough Mfg	‡$1Q	Sept. 30, 29	200	183	183	182½	182½	+ 1
23	16	29	16⅞	36,123,350	10	Continental Oil	.....	Dec. 15 27	4,800	20¾	22¼	19⅜	22	+ 1⅜
17½	9½	11⅞	7⅜	.....	N.P.	Creole Petroleum	.....	.....	9,700	8⅞	9	8½	8⅝	+ ⅛
82	67	95	60	1,500,000	50	Cumberland Pipe Line	$1Q	Sept. 16, 29	.....	.....	.....	.....	.....	.....
88	64⅜	70½	50	5,000,000	100	Eureka Pipe Line	$1Q	Aug. 15, 29	.....	.....	.....	.....	.....	.....
13	4¼	7	5	16,000,000	100	Galena Signal Oil	.....	June 30, 25	.....	.....	.....	.....	.....	.....
86	26	90	73½	4,000,000	100	do new pfd	.....	June 30 26	.....	.....	.....	.....	.....	.....
89¾	35	88	73½	2,000,000	100	do old pfd	.....	June 30, 26	.....	.....	.....	.....	.....	.....
114¾	59¼	128	89⅜	73,685,700	25	Humble Oil & Refining	‡30cQ	Oct. 1, 29	10,600	120⅛	120⅜	115⅝	116	— 3
290½	176½	340½	285	20,000,000	100	Illinois Pipe Line	$10S.A.	June 15, 29	4,500	305	308	303	303	+ 2⅜
104	56¾	41	26¾	(sh) 26,421,768	N.P.	Imperial of Canada	12½cQ	Sept. 2, 29	8,500	36¾	37	35	36	— ⅜
91⅞	74⅝	34⅞	26¾	$1,000,000	$10	Indiana Pipe Line	.....	.....	1,900	33	*34⅞	33	34⅛	+ 1⅜
55	35	29⅜	22½	(sh) 14,247,088	N.P.	International Petroleum	12½c	June 25, 29	23,500	28⅞	29	27⅛	28	— ⅜
32⅝	19¾	25⅞	19	$6,363,350	12.50	National Transit Co	25cQ	Sept. 16, 29	8,800	20½	20½	†19	20	— ¼
75	38½	85	72	1,000,000	10	New York Transit	40c	Oct. 15, 29	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	do new	.....	.....	400	16	16	15⅜	15⅜	0
69	56½	63	52	2,000,000	50	Northern Pipe Line	$2S.A.	July 1, 29	.....	.....	.....	.....	.....	.....
83½	58½	79⅞	64⅜	60,000,000	25	Ohio Oil Co	50cQ	Sept. 14, 29	1,900	78⅞	78⅝	77⅛	78⅛	— ¼
84	28	44½	23¾	10,000,000	25	Penn Mex. Fuel	$1	Sept. 30, 29	.....	.....	.....	.....	.....	.....
220	167	50	36½	4,000,000	25	Solar Refining	$1.25S.A.	June 20, 29	.....	.....	.....	.....	.....	.....
19	12	23½	13	1,000,000	10	Southern Pipe Line	$1	Mar. 1, 29	400	22	22	22	22	0
71⅞	36¾	60¼	40⅜	30,000,000	25	South Penn Oil	50cQ	Sept. 30, 29	900	48	48	47	47	— 1
102	70	70	56	1,750,000	50	South West Pa. Pipe Lines	$1	Oct. 1, 29	50	56	56	56	56	0
95⅞	70⅞	63	51⅜	348,175,069	25	S. O. Indiana	62½cQ	Sept. 16, 29	93,100	57⅛	57¼	54⅞	55⅛	— ⅛
27¾	15	33⅜	18	8,000,000	25	S. O. Kansas	.....	June 16, 24	9,200	30⅞	*33¾	30	31½	+ ⅛
49	44	46⅜	35½	25,654,516	10	S. O. Kentucky new	40cQ	Sept. 30, 29	12,800	46¼	*46⅜	42⅛	43⅞	— 1⅜
54⅜	39⅞	50¼	45½	4,649,225	25	S. O. Nebraska	‡62½cQ	Sept. 20, 29	100	48	48	47	47	— 1
134	71	129	110	14,000,000	25	S. O. Ohio	62½cQ	Oct. 1, 29	100	110¼	111	†110	110	— 2
125	116	124½	113½	7,000,000	100	do pfd	$1.75Q	Sept. 3, 29	70	116½	119	116½	119	+ 3½
23½	16	18	14	861,466	25	Swan Finch	30c	Jan. 15, 29	.....	.....	.....	.....	.....	.....
111	72	133¾	105½	126,154,000	25	Vacuum Oil	$1Q	Sept. 20, 29	4,500	125⅞	126⅞	120	120	— 5⅜

*New High †New Low ‡Also Extras

Independent Oils on New York Curb

1928 High	1928 Low	1929 High	1929 Low	Par Value	Stocks	Transactions Week Ended Oct. 19 Sales	First	High	Low	Last	Change
1½	.53	.72	.25	$5	Amer. Cons. Oilfields	3,700	¼	¼	3/16	¼	0
9½	3⅛	8¾	3	N.P.	Amer. Maracaibo	3,400	3¼	3¼	3	3⅛	0
4½	2¼	4¾	1½	$10	Argo Oil	300	1⅜	1⅝	†1½	1½	— ¼
3¾	3⅜	26	3¾	N.P.	Arkansas Nat. Gas	28,800	22⅛	22⅞	18¾	18¾	— 4
.....	.....	24¾	6¾	N.P.	do A	78,800	21⅞	22	18½	19⅛	— 2⅞
.....	.....	9	7⅞	10	do pfd	300	8⅜	8½	8⅜	8⅜	— ⅛
55	32¾	70	50	N.P.	British American Oil	.....	.....	.....	.....	.....	.....
23⅞	3¾	4⅞	2	25c	Carib Syndicate	5,200	2	2⅝	2	2¼	+ ⅛
.....	.....	68⅛	27¾	N.P.	Cities Service new	397,500	66½	*68⅛	66½	66⅝	+ ¼
103½	94½	99¼	93½	100	do pfd	2,800	94¼	94¾	94¼	94½	0
9⅝	8¼	9¼	8⅞	10	do pref B	400	9	9	9	9	+ 1/16
97	88½	96	89¼	100	do pref. BB	100	89¼	89¼	†89¼	89¼	0
2¼	1	1½	½	1	Colombia Syndicate	1,100	⅝	¾	⅝	¾	0
17¾	9¾	15	6	N.P.	Colon Oil	4,100	9¼	9¼	8¾	9⅛	+ ⅛
8⅞	6¼	11⅛	4⅞	10	Consolidated Royal	400	5	5	4⅞	4⅞	— ⅛
.....	.....	135	45	N.P.	Cosden Oil Co	24,200	97⅞	*135	97⅞	130⅝	+32⅞
.....	.....	82	71	.....	do pfd	.....	.....	.....	.....	.....	.....
3¼	.76	2½	⅝	N.P.	Crown Central	1,200	⅞	1	⅞	⅞	0
15	6¾	11⅜	4	N.P.	Crystal Oil	.....	.....	.....	.....	.....	.....
50	48	51⅜	51⅜	$100	do pfd	.....	.....	.....	.....	.....	.....
33½	8⅛	26	10	N.P.	Darby Petroleum	1,100	11⅜	11⅝	11	11¼	— 1¼
2⅞	1	11	2	N.P.	Derby Oil & Refining	2,800	7⅝	7⅞	7	7	— 1
21⅛	7½	44	20⅞	N.P.	do pfd	.....	.....	.....	.....	.....	.....
165	101⅛	209	142⅛	$25	Gulf Oil Corp	19,400	195	199½	184⅞	184⅞	—10
7½	5⅜	7½	1⅜	5	Homaokla Oil	3,400	3½	4⅜	3½	4	+ ½
3⅜	1	2⅞	1⅜	10	Intercontinental Pet.	8,700	1½	1½	1¼	1¼	— ⅛
3	¼	3⅜	1½	N.P.	Kirby Petroleum	2,400	2¼	2⅝	2¼	2½	— ¼
9¾	5⅛	6⅛	2⅞	N.P.	Leonard Oil & Dev	2,400	3½	3½	3¼	3⅜	— ⅛
43⅜	20	38⅞	23⅛	N.P.	Lion Oil & Refg	1,900	30½	31	28⅝	28⅝	— 2⅜
.....	.....	67⅞	32¼	N.P.	Lone Star Gas	2,800	62⅞	62⅞	51½	55	— 7
1⅞	.50	1¼	⅜	1	Magdalena Syndicate	800	⅜	⅜	⅜	⅜	0
48½	32	38½	18⅜	N.P.	Margay Oil	.....	.....	.....	.....	.....	.....
8	2¾	6⅜	2¾	N.P.	Mexico-Ohio Oil	600	3	3	3	3	0
.....	.....	42	15⅞	N.P	Mjssouri-Kan. P. L.	9,510	32½	32¾	30⅞	31⅝	— ¾
1¾	.76	1½	⅞	1	Mountain & Gulf	2,200	⅞	⅞	⅞	⅞	0
28⅞	19½	22⅝	10	10	Mountain Producers	7,800	10½	10⅜	10¼	10¼	— ⅛
.....	.....	43⅞	24¾	N.P.	Nat. Fuel Gas (new)	3,800	37½	37½	34	34	— 3⅞
5⅝	4¼	5	3	5	New Bradford	500	3⅜	3⅜	3	3	— ⅛
5½	3	3⅞	3	10	New England Fuel	.....	.....	.....	.....	.....	.....
11⅞	7⅛	9⅜	4	1	New Mex. & Ariz	400	4¼	4½	4¼	4½	+ ½
15½	11½	24½	16	25	New York Petrol	.....	.....	.....	.....	.....	.....
13¼	8⅛	18½	8¾	N.P.	North Cent. Texas	100	11½	11½	11¼	11¼	— ⅛
.....	.....	19¼	12½	N.P.	Oil Stock, Ltd. A	500	13⅛	13¾	13⅛	13⅛	— ⅛
.....	.....	18¼	14	N.P.	do B	200	14	14½	†14	14½	— ½
26¼	20	26⅝	14½	N.P.	Pacific Western Oil	800	20⅜	20⅜	19	19⅜	— 1¼
6	2¼	3½	½	N.P.	Pandem Oil	500	¾	¾	⅝	⅝	— ⅛
15⅝	8½	10½	3⅞	N.P	Pantepec Oil	100	5¼	5¼	4¾	5	0
20	10⅜	25½	22½	$25	Paragon Refg. B. ctfs.	.....	.....	.....	.....	.....	.....
.....	.....	34½	24½	N.P.	Petroleum Corp	11,800	27½	28	26	26⅛	— ⅞
31⅜	26½	37	22	N.P.	Plymouth Oil	4,500	33⅛	*37	31⅛	31⅛	+ ⅞
18	8	16	10	25	Red Bank Oil	300	14½	14½	10¼	10¼	+ ¼
13	4⅛	8½	3¼	N.P.	Reiter-Foster	200	3⅜	3½	3⅜	3½	0
31½	23¼	25½	23¼	$25	Richfield pfd	200	24⅞	24⅞	24⅞	24⅞	0
.....	.....	29	23	.....	Root Refining pfd	1,300	26½	25½	24½	24½	— 3
12	4⅜	11	5	N.P.	Ryan Consolidated	200	6	6	5⅜	5⅜	— ⅜
7¼	5½	5⅞	2	$10	Salt Creek Cons	500	2⅞	3	2½	2½	— ⅜
35	23¼	25⅞	12⅜	10	Salt Creek Prod	200	13	13	†12⅜	12⅜	— ⅝
3½	1	2½	½	5	Savoy Oil	.....	.....	.....	.....	.....	.....
40	27	33⅛	32	25	Shreveport El Dorado	.....	.....	.....	.....	.....	.....
.....	.....	24	14⅛	N.P.	Southland Royalty	4,600	15	15¼	†14⅛	15	0
.....	.....	12	8	N.P.	Sunray Oil	100	8⅝	8⅝	8⅝	8⅝	0
.....	.....	23	12½	N.P.	Texon Oil & Land new	3,400	15⅜	16⅞	14½	15	0
22⅞	13	16⅞	11⅝	$10	Tidal Osage	.....	.....	.....	.....	.....	.....
21¼	13⅛	16½	10⅜	10	do not-voting	.....	.....	.....	.....	.....	.....
93¾	75	155	80	100	Transcontinental pfd	.....	.....	.....	.....	.....	.....
74¼	18	81⅛	66	10	Venezuela-Mexico	.....	.....	.....	.....	.....	.....
9⅛	4¾	6½	3	5	Venezuelan Petrol	4,100	3½	3¾	3⅜	3⅜	0
.....	.....	72¼	66	N.P.	White Star Oil	.....	.....	.....	.....	.....	.....
8¼	4¼	9⅛	4	1	Woodley Petroleum	1,300	4½	5¼	4½	4⅝	+ ⅛
⅜	⅛	5⅜	1	25	Y Oil & Gas	200	1½	1½	1¼	1¼	— ¼

*New High †New Low

New York Curb Bonds

Week Ending Oct. 18

	High	Low	Last	Change
Beacon Oil 6s '36	120	99½	120	+3
Cities Service 5s '66	87	84½	87	+1
Cities Serv. G. 5½s '42	86¾	86	86¾	+ ¾
Cities Serv. G. P. 6s '43	93⅛	92½	93⅛	+ ⅝
Cont. Oil 5¼s '37	94	92¼	94	+1¾
Empire O & R 5½s '42	87	86½	87	+ ¾
Gulf Oil 5s '37	100	99⅛	99⅞	+ ⅝
Gulf Oil 5s '47	100	99¼	99¾	0
Indep. Oil 6s '39	105	103½	103½	—1½
Sun Oil 5½s '39	100⅜	99⅜	100	+ ⅜
Shell Union Oil 5s '49	100⅜	100	100	— ⅛

Oil Dividends

	Amount	Payable	Stock of Record
Cities Service m	2½c	Dec. 1	Nov. 15
do stock m	½%	Dec. 1	Nov. 15
do pfd. m	50c	Dec. 1	Nov. 15
do pref. BB m	50c	Dec. 1	Nov. 15
do pref. B m	5c	Dec. 1	Nov. 15
N. Central Texas q	15c	Dec. 2	Nov. 11
Pet. & Trading A q	31¼c	Nov. 1	Oct. 18
Sinclair Cons. pfd. q	$2	Nov. 15	Nov. 1
Sun Oil q	25c	Dec. 16	Nov. 25
do stock	9%	Dec. 16	Nov. 25
do pfd. q	$1.50	Dec. 2	Nov. 11
Venezuelan Petroleum q	5c	Nov. 15	Oct. 31

New York Bonds

Week Ending Oct. 18

	High	Low	Last	Change
Assoc. Oil Gold 6s	102	101½	101¾	— ⅛
Atlantic Refg. deb. 5s	100⅜	100	100⅜	+ ⅜
Cal. Pet. 5s	95	93	94½	0
Cal. Pet. 5½s	98½	96½	98½	0
General Pet. 5s	99⅞	99	99⅜	— ⅛
Humble Oil & Refg. 5s	99⅞	99¼	99¾	+ ⅜
Humble Oil & Refg. 5½s	100¼	100	100	0
Pan Amer. P & T 7s	104½	104½	104½	0
Pan Amer. P & T 6s	106	103	104¼	— 2
Pan Amer. P & T 6s	98	96½	97½	+1
Phillips Pet. 5¼s	90	88	89½	+ ½
Pure Oil 5½s	98½	98	98½	— ¼
Richfield Oil of Calif. 6s	99¾	98¾	99½	0
Shell Union Oil 5s	95	93½	93½	— ¾
Sinclair Con. Oil 7s	101⅞	100⅞	101¾	+ ¼
Sinclair Con. Oil 6½s	100	98⅞	100	+ ⅝
Sinclair Con. Oil 6s D	99	98⅝	98⅞	+ ¼
Sinclair Oil Crude 5½s	95½	94	95	+ ½
Sinclair Pipeline	93	92¾	93	0
Skelly Oil 5½s	90¼	89⅜	90¼	+ ¾
S. O. N. J. 5s	101¾	100¾	101¾	+ ¾
S. O. N. Y. 4½s	95½	94¼	95½	+1¼
Union Oil of Calif 5s C	96¼	95¾	96¼	+2
Warner-Quinlan 6s	96	94¼	94¼	—1⅜
White Eagle Oil 5½s	101¾	101¼	101½	— ¼